

SPICES IN EARLY MODERN ENGLAND – A CROSS DISCIPLINARY STUDY

A thesis submitted for the degree of Doctor of Philosophy

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## **Declaration**

The work submitted in this thesis was conducted between 2016 and 2025 at Brunel University (Uxbridge, West London, UK). This work was conducted independently and has not been submitted for any other degree.

## Abstract

Reading popular English literature of the last hundred years would lead one to believe that English food always has been bland. This is surprising, considering that England, during the early modern period (1500-1850 AD) established the East India Company, partially for the spice trade and became the largest global spice merchant, centred on London. Hence, it cannot be that the English spice trade did not influence English Culture. What happened during the early modern period that significantly changed the usage of spices in English culture?

Using an enhanced food choice model, this dissertation analyses how factors such as imports, exports, storage, consumer income, historical/geographical antecedents, spice production and pricing influenced the spice supply into England, which then impacted spice-buying behaviour and usage. The research has used primary data sources from the British Library's East India Archive, UK National Archives, Newspaper Archives and English Ports Data, and relied on secondary academic data sources.

This data was used for an economic historical analysis of the English spice trade, spices used as financial assets, crimes, spice usage in food and medicine, its representation in art and literature, religion, magic, perfumes, fashion, and clothing. The findings show that spice usage was common until 1800-1850. Thereafter, cultural, political, and scientific factors led to its decline. War necessitated distinguishing bland English food from spiced French food after Waterloo; the repudiation of the medical humoral theory positing that spices heal the sick; and a rise in atheism/non-religiosity and better education combined to substantially reduce spice usage across many aspects of English Culture.

Since mid-twentieth century, the Chicken Tikka Masala curry has become the English national dish. This is no novelty. The study shows that English food has been spiced since Roman Times; the century of bland food (1850-1950) was an aberration.

## **Dedication**

The spice trade historically has been involved with some amazing characters. There have been heroes, murderers, charlatans, forgers, soldiers of fortune, cooks and chefs, admirals and generals, merchants and warehousemen, sailors and factors, ship owners and ship captains, spice thieves and pedlars. The road and sea-based spice roads and routes were mysterious, torrid, dangerous, exciting and exotic – traversed by so many men/women. They changed the history of the world. This dissertation is dedicated to all in the spice trade who have made my last six years so amazing and interesting.



# Acknowledgements

## Ingredients

1. A desire for research and asking weird questions.
2. Love of food for which I thank Ma and Baba for inculcating that in me.
3. Quantitative background – in God we trust – all others bring Data.
4. Great history supervisors such as Professor Kenneth Morgan and Martin Folly who I can't thank enough.
5. Availability of records in London for example in the British Library which became my home for so many years.
6. Great libraries with awesome people like Margaret Makepeace in British Library who were able to guide me all over the 100's of miles of shelving.
7. Observe work colleagues, friends, and family warily to estimate possible reaction to me announcing that I am embarking on yet another PhD voyage of discovery.

## Preparation

1. Slice up the overall food area till you get to just the spices section.
2. Discuss with patient Professors on the research topic so many times till I am sure they are bored – thank you for your patience.
3. Bother them for guidance on where to get the data. Keep being amazed at their wide reading and knowledge.
4. Understand the various cross-cultural factors that might play in the thesis – get gobsmacked at the wide influence food plays in our culture.
5. Warn work colleagues, parents, and family that this is now a reality – bribe/threaten them to help you.
6. Listen carefully to Brunel University staff members such as Astrid Swenson, Inge Dornan, Alison Carrol, Steven Wagner, Daniela Richterova, Matthew Hughes and scores of other staff and fellow students at Brunel at the research conferences and WhatsApp group discussions at Brunel.
7. Consider how much sleeping and studying habits will need to be changed/added and thank the family.

## Cooking

1. Read like a maniac, dog ear books, travel to various countries and try various cuisines. Thank friends who send you books and suggestions.
2. Spend crazy amounts of money on books (both new and antiquarian) – thank the long-suffering lady wife for not throwing me out of the house for cluttering up the place.
3. Dive into the dusty tomes in British Library, National Archive, Wellcome Trust and other libraries for old records, manuscripts, proclamations, and meeting minutes. Award gold medals to the librarians.
4. Become a medieval expert in medicine by studying herbs, spices, and medicines in herb gardens and the Wellcome Trust library – thank the cooks at the café for keeping me well fed and watered.
5. Fog up glass cases in Victoria and Albert Museum and other Museums in search of spice related objects – thanks to the curators for showing me the incredible wealth of spicy art objects.
6. Get a crick in the neck and make gallery curators nervous when peering closely at tiny, obscure bits of paintings showing food/spice – thank you to the curatorial staff.
7. Start writing frantically, copiously, and extensively.

8. Placate colleagues, parents and family with home cooked medieval food which turns out to be rubbish.

### **Serving**

1. After finding out you have written more than 230,000 words, take a machete to the dissertation and try to get it to somewhat near 100,000 words – all whilst weeping copiously.
2. Delete more than 50% of images of apothecary jars, paintings & spice objects with a catch in your throat.
3. Edit, re-edit, edit multiple times whilst being sick with covid, pneumonia, osteoarthritis, work pressures, family issues. Thank Professors, friends, and family for understanding and taking care of me.
4. Look at the final draft with mixed emotions and send it off to the university with relief, hope and happiness.

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# 1. Introduction

Reading British literature classics, from Jane Austen to PG Wodehouse indicates that British food was simple and barely spiced. It was, therefore, astonishing to learn that Chicken Tikka Masala is the British National Dish, as stated in 2001 by then British Foreign Secretary, Robin Cook, who embraced Britain's racial and cultural diversity in this statement.<sup>1</sup> Indeed, there are a variety of Indian cuisine shops in every town centre. This leads to the question: how did British cuisine (considered bland, not spicy, and simple) suddenly turn to using more spices? As will be illustrated, English cuisine has used spices since Roman times, as evidenced by Roman writing tablets at Hadrian's Wall mentioning pepper.<sup>2</sup> During the '*Age of Discovery*' during the fourteenth to sixteenth centuries, British, Spanish, Italian, Portuguese, and other explorers (either individually or through corporates, such as the Dutch and English East India Companies) were to a certain extent driven by the spice trade, and spices were used in a variety of dishes in England.

England has been home to migrants for most of recorded history either from the east such as the Vikings or from the south such as Romans all who left their culinary mark on English food. Not just migrants but also returnees such as the East India Company (EIC) employees who spread their concept of spiced food in the form of curry within English Society. As Nechtman points out, the cultural shock of the returning Nabobs (as the returning EIC employees were pejoratively called because were rich, with different tastes, language, dress and food) to the UK, with their wealth, their tanned skins, their clothes, different vocabulary and their substantially changed cuisine was large.<sup>3</sup> Advertisements for curry powder were not just aimed for cooking, but also as an experience which shaped a person's health and sexual behaviour. Nechtman reviews the material artefacts (such as Indian architecture, clothing, cuisine) and discusses how curries became popular and started to show up in English cookbooks such as by Glasse in 1758 who wrote the first curry recipe. And it could well be the severe reaction against the Nabobs added to the anti-French feeling post Waterloo inexorably let British Society to reject spicy food.

Despite this long history of trade in spices and their usage, why British food became considered to be bland in the nineteenth and early twentieth centuries? The research focus of this thesis, therefore, is the early modern period: starting around the fifteenth century, when the spice trade increased dramatically with the opening of the European sea route to Asia, until around the mid eighteenth century when the use of spices decreased considerably. Further analysis, as will be shown in Chapters 2-4, indicated that spices were not only used in food, but also in medicine, religious rituals, magic, painting, art, investment, and financial transactions—and were objects of art, as well as crime. Spices have had an indelible impact on human history, geography, economics, and civilisation. This raises two major questions. Question 1: why and how did spices become so prevalent in England, and why were spices so ubiquitous in food and medicine: why was food medicine and medicine food? Question 2: As spices were present in many cultural activities in England, from Roman times to the early modern period, why did the use of spices decline

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<sup>1</sup> Sarkar, (2009) p89.

<sup>2</sup> Bowman and Thomas, (1983); Anonymous, *Vindolandala*

<sup>3</sup> Nechtman, (2006)

significantly after the early nineteenth century? How and why did this change in the relationship between spices and British culture happen? Hence, the overall thesis statement is framed as:

English culture responded positively to the positive spice supply shock at the beginning of the early modern period, with the rise of East India Company spice imports and return of the nabobs but the demand for spices dropped completely by the end of the period.

Researching these questions can provide interesting insights into the evolution and trajectory of some aspects of English culture, considering the significant changes that peaked and then dropped precipitously due to developments during the early modern period. As spices are primarily considered food ingredients, food choice theory is a good starting point to attempt to answer the primary question of why spices were so popular in recorded history, specifically during the early modern period in England. Whilst a typical current understanding would be that the main use of spices was in food preparation during the early modern period, unlike other food items, spices were also used in a variety of other ways, meaning that the models of common food choice theory need to be extended, as discussed later in the methodology section of this chapter. Other uses include medicinal, religious, day-to-day non-food/medicinal uses, financial purposes, as well as seen as status symbols. A multi-dimensional approach is necessary, as all usages are interrelated.

This research aims to shed light on the usage of an important commodity which has, appreciably shaped British history and culture but has not received the attention it deserves. For example, two prominent historians- namely Huw Bowen & Kirti N. Chaudhuri<sup>4</sup> who explored the economic history of the East India Company (EIC), covering topics such as textiles (cotton and muslin), indigo, saltpetre, tobacco/tea/coffee, and other food items, silk, and porcelain in a very detailed way, yet relegated spices to a miscellaneous category, combined with other items. At best, Chaudhuri explored the pepper trade, but that, too, only from a corporate and commercial business history and economics perspective. Neither historian mention why they ignored spices, given their importance. This could be due to other commodities being simpler to analyse, having more extant salience, being used more widely, better data availability, and focusing on the broader picture of traded goods; whilst spices were more difficult to analyse and were from different locations, data was difficult to procure, or they were simply overlooked. Given the massive impact that spices had on diverse areas of human endeavour and civilisation from the Roman to the Nabatean periods, explorers such as Christopher Columbus and Vasco da Gama established the recognition of countries like Brazil and the Caribbean countries. The spice trade was embedded in the expansion of shipbuilding, advances in medicine, and many other human developments. This research aims to make the history of spice usage in England better known.

## **1.1. Literature Review**

The early modern period (1500-1800) has been a fecund research resource for exploring the use of spices. There are numerous books dedicated to single related food items such as curry,<sup>5</sup> or a

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<sup>4</sup> Huw Bowen (2008 & 2011); Bowen, Lincoln and Rigby (2011) and Kirti N. Chaudhuri (2011)

<sup>5</sup> Collingham, L (2010)

vegetable such as a potato,<sup>6</sup> and individual spices such as pepper, saffron, nutmeg and salt.<sup>7</sup> As discussed later in the chapter, there are other books on spices from an academic, semi-academic and popular culture perspective. This literature reviews the history of a food or spice, providing a background to their exploration and discovery with some of the related agronomy, and many explore recipes. Some examples relate to the history of national dishes, such as curry in India and kimchee in Korea, vegetables such as onions and potatoes, herbs such as garlic and individual spices. These works are single food item books, and while they treat a particular item in detail, they do not engage broadly with the topic. This unidimensional treatment is relevant to understand a particular food item; however, spices, especially, were combined with other spices and herbs, for health-related benefits rather than just for flavour in food. Even the books dealing with national dishes, such as curry or kimchee focus their research narrowly on the food element and not widely across economic, health, clothing, and crime factors. Even when spices are considered, they are treated in isolation or briefly alluded to amongst other ingredients, or providing an interesting anecdote, rather than as an in-depth study of the spice usage or drawing a broad brush across all cultural factors related to spices.

While this study focuses on spices, herbs need to be discussed as well as the distinction between them. Common usage now refers to herbs that are typically derived from the leaves of plants, used fresh or dried, mainly grown in temperate climates, and used for flavouring or garnishing in cooking – basil, parsley, mint and oregano fall into these categories. Spices, on the other hand, are derived from other parts of the plant, such as seeds, roots, bark, flowers or fruit, mostly used in dried form, often sourced from tropical regions, and have a much stronger / concentrated flavour than herbs. That said, for most of recorded history including the Medieval Times prior to the early modern period, the differentiation between the two was less precise, and their classification depended on the context. Herbs were referred broadly as any plant with medicinal or culinary uses and not limited to leaves, grown locally in monastery gardens or collected in the wild, used for cooking, medicines and religious rituals. Spices, on the other hand, with exceptions like saffron, were foreign and exotic, used for their preservative, medicinal and flavouring properties and included dried parsley. In the early modern period, the definitions were still fluid and nothing that the research threw up had a clear-cut definition of either. Herbs in the sixteenth to eighteenth centuries referred to plants with medicinal, culinary, or aromatic properties and were used by physicians and apothecaries and in kitchens. Spices were still seen as exotic high-value goods – usually imported from exotic locations, linked with trade routes, colonial expansion and global commerce. Given this highly contextual definition of herbs versus spices, it is not surprising that sometimes both were used interchangeably. Some spices, such as bay leaves or rosemary are both strong aromatics, which may be termed as herbs for them to be leaves but can be considered spices due to their strong aroma and use in medicines. Saffron was grown in Saffron Walden in Essex, England – so not quite exotic lands. The key aspect to note is that in the early modern period, herbs and spices were used for a multiplicity of uses and thus the usage context was important, food used to be medicine hence there was no strong distinction between herbs and spices and in some cases, will be used interchangeably. Finally, even an eminent historian such as Braudel does not distinguish between them and calls saffron, thyme, marjoram, bay leaves, aniseed, coriander and

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<sup>6</sup> Smith, A. F., (2012)

<sup>7</sup> Pepper - Shaffer, M, (2014), Kerros, E. D, Bortoli B, Czerw G, (2016), and McFadden, C, (2012); Saffron - Anonymous, (2003), Lundberg, L, (2020), Fairhurst, M, Brewer, V, Bouland, K. (2016) and Willard, P, (2002); Nutmeg, Milton, G, (2015) and Salt by Kurlansky, M, (2011)

garlic as spice.<sup>8</sup> The author has not come across any academic or non-academic treatment which strongly distinguishes between herbs or spices or spends effort on trying to have a rigorous taxonomy/methodology to distinguish them.

Nevertheless, the realm of spices has been covered quite extensively in the popular and academic press. These books range from an academic portrayal of spice usage to a semi-academic treatment of spices with some footnotes and references to popular culture relating to myths, legends, and recipes.<sup>9</sup> Even in books devoted to a single spice, discussion focuses on the unique qualities of the spice rather than considering the wider aspects of how and why the usage of spices was anchored in society. They skim the surface, concentrating on the more salubrious nature of spices or mentioning them as part of a recipe. Much of the treatment of spices in this category falls into the admittedly interesting trade element: the spice trade has attracted great interest, given its exotic and evocative nature. After all, the '*Age of Discovery*' was largely driven by the need to find better sea routes to India and new sources of spices. This was one of humanity's seminal achievements, which brought the New World into the Old World.<sup>10</sup> Hence, these works focused on the commerce, geography, sea routes, and unique noteworthy people involved in the spice trade. That said, none of the referenced works relating to the spice trade cover the economic or food implications, nor other aspects such as crime, fashion, and the deep theoretical and longstanding links with ancient Greek health theories, other than superficially, or in other related matters.

There is academic research on related aspects, such as studies on the economic history of individual spices including price formation,<sup>11</sup> and the three most important EICs of Portugal, Netherlands and England.<sup>12</sup> These studies focus on the production and financial perspectives of the relevant EICs and, in many cases, the corporate history of the firms, which began in the fifteenth century and were mainly finished by the nineteenth century. This rather neatly matches the early modern period. Spice history was indeed considered, but other than the aforementioned KN Chaudhuri's work, which addressed price history analysis for pepper limited to EIC journal data, no other research comprehensively explored the price history of spices, including production data from Vereenigde Oostindische Compagnie (VOC – the Dutch East India Company), customs data, the net selling price data, or the broader time period pre- to end of early modern England, and shipping data. Scholars have researched consumption, related to food and medical history. An edited volume on food consumption by Brewer & Porter<sup>13</sup> is one such example where Colin Campbell<sup>14</sup> explores the consumption patterns in eighteenth century England and Jan de Vries<sup>15</sup> examines how household economy and consumption patterns were formed in early modern Europe. Sidney W Mintz,<sup>16</sup> who

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<sup>8</sup> Braudel (1979), p220 Volume 1

<sup>9</sup> See Searl, D, (2005); Wells, D. (2005); Keay, J, (2008); Czarra, F R. (2009); Gambrelle, F, Bossahba, S, Michalon, M, (2008); PenzeyMoog, C, (2019); Holcroft, H, (2000); Sidebotham, S E. (2011); Turner, J. (2004); Dalby, A, (2000) and Halikowski-Smith, S. (2001)

<sup>10</sup> Arnold (2013), p3, 8, 11-15

<sup>11</sup> Pearson, M N, (ed) (2017), O'Rourke, K H, & Williamson, JG, (2009) and de Zwart, P, (2016)

<sup>12</sup> Portugal - Halikowski-Smith, S. (2001), Netherlands - Clulow, A, & Mostert, T, (2018), Gommans, J J L. (2018) and Guleij, R, Knaap G J, Brood, P, (2017), and England - Pickett, C (2011), Keay, J.(2017), Chaudhuri, K. N, (1999 & 2011), Finn, M, Smith K, (2018), Clulow, A, & Mostert, T, (2018), Mishra, R, (2018), Gommans, J J L. (2018) and Uitgeverij Vantilt and Wagner, M, (2018)

<sup>13</sup> Brewer & Porter (1994)

<sup>14</sup> *ibid*, p40-57

<sup>15</sup> *ibid*, p85-132

<sup>16</sup> *ibid*, p261-273

explores how food was related to the study of consumption and Carole Shammas,<sup>17</sup> who investigates how English and Anglo-American consumption changed between 1550 and 1800, with food being a major factor. This volume looks at all goods, not just food; hence the treatment of spices is minuscule. Spary looks at the entire gamut of how French cuisine and liqueur production changed over the early modern period and shows good treatment on how the use of spices changed over this period due to changes in cuisine, appearance and understanding of medical aspects relating to diet, nutrition, blood circulation, bacterium and the like. For example, she cites the example of a gentleman who abstains from spices (following the Galenic model) as he fell ill.<sup>18</sup>

The *Oxford Handbook of the History of Consumption*,<sup>19</sup> takes a different approach, having sections delineated by traditions (from Ancient Athens to seventeenth century Britain): how did consumption diffuse (from transatlantic to India to the world), the difference between rich and poor (such as luxury and city versus country), places of consumption (public places, shops, sites) and technology (energy, waste, eating, saving and spending). This handbook looks at the consumption of all goods, not just food. Much of this consumption-based research relied on probate, church, and institutional records, but no study evaluated the consumption of spices other than in passing or aggregating them in miscellaneous categories.

Some researchers have published in-depth consumption studies such as Jon Stobart who, either singly or with other authors, published separate books on consumption in country houses, shopping in English towns, grocers, second-hand trade, and retail shops utilising similar data—although coverage of spices is patchy.<sup>20</sup> Wallis looks at specialised retail shops in early modern England and focuses on apothecaries. Medicine consumption is not an area which is well studied, but this paper comprehensively addresses the issues by analysing their geographical space, the design of apothecary jars and their contents and concludes with some behavioural aspects of both apothecaries and the consumers.<sup>21</sup> This methodology of jar analysis is adopted in this dissertation as well. In a related study, the contributors to Woolgar et al. look not just at consumption of foodstuffs such as field crops, garden produce, beef, pork, dairy products, fish, poultry, and venison, but also, at consumption through a medical lens in terms of diet and nutrition.<sup>22</sup> This includes how food consumption varied by season and how diets fluctuated according to demography or dietary practices in monasteries. Unfortunately, whilst providing in-depth materials, none of these essays address spice consumption. Two similar stand-alone works by Carole Shammas examine the habits of pre-industrial consumers in England and colonial-era North America by looking at household production, changes in consumer demand, food consumption, new commodities, and country shop/colonial retailing. Both works look at food overall and spices are not addressed in detail.<sup>23</sup>

Gray looks at food consumption via a gender and class lens on dining practices over the period 1750 – 1900 and uses tea as a case study to test her conclusions.<sup>24</sup> Lehman also uses a similar gender lens (the English housewife) to evaluate consumption, in part by reviewing cookery books and culinary styles in the eighteenth century. Aside from brief mention of spices in recipes, she

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<sup>17</sup> *ibid*, p177-205

<sup>18</sup> Spary (2012), p 103

<sup>19</sup> Trentmann, ed (2014)

<sup>20</sup> Stobart and Rothery, (2016); Stobart, Hann and Morgan, (2013); Stobart, (2013); Stobart and Hann, (2016); Stobart and VanDamme, (2010); Stobart and Bailey, (2017)

<sup>21</sup> Wallis (2008)

<sup>22</sup> Woolgar et al. (2009)

<sup>23</sup> Shammas, (1990 & 2008)

<sup>24</sup> Gray (2009)

points to the fact that French cooking (which used spices) was no longer referred to in cookery books by the end of the Eighteenth century.<sup>25</sup> However, some of these studies have referred to spice data, for example from probate records, that will be used in this dissertation to provide context.

Another area of academic research refers to the supply chains, detailing how the movement of food and related items moved from the production location (usually in Asia) to Europe and England. The term *Spice Route* or *Spice Road* is almost as well known as the *Silk Road/Route* when it comes to describing the movement of spices, both over land and by sea routes after they were opened by the Portuguese.<sup>26</sup> The previous consumption references also covered some elements of the supply chain, usually briefly talking about how the goods arrived on the shores/in the ports of England, and then delving deeper into the domestic supply chain, from the port to the warehouse to the wholesaler to the retail shops in cities and towns, and in some case, the itinerant pedlar who took small amounts of spices and other goods to the smaller villages. Chaudhuri digs deeper into the EIC supply chain mechanism, exploring how the broader purchasing methods in Asia worked, the shipping schedule, communication and control, the selling market with merchants and other related details. What he does not do is to look at the English leg of the supply chain, which is a major omission as that area has so far not been explored and would have presented a unified view of supply from the producer to the consumer. Besides a general overview, he does provide more detail on specific commodities such as textiles, raw silk, and coffee, and exceptionally, dedicates an entire chapter to pepper, although his data could not be replicated by looking at the Accountant General Ledgers – the reasons are explained in Chapter 2 – Economic History of Spices.<sup>27</sup>

On supply chains, Krondl has analysed city-based spice supply chains whilst Blonde et al. have produced a collected work of contributions focusing on European supply chains during medieval and early modern Europe times and makes some mention of the intra-continental spice trade between Lisbon, Venice, and Genoa and onwards up to Northern European cities such as London and Antwerp. The entire volume focuses on the daily practice of buying and selling, interactions between retailer and consumer and how those changed; gender and physical spaces are also explored. For example, Vanessa Harding in Chapter 8 explores the shops, markets and retailers in London's Cheapside, c 1500-1700 and mentions the apothecaries and grocers who would sell spice-based medicines or spices by themselves.<sup>28</sup>

The next theme in the literary corpus relates to the London-based worshipful companies/societies, and the formalised merchant networks which were involved in the spice trade.<sup>29</sup> One of the oldest, relevant livery companies was the *Pepperers*, active since 1180, and formalised as a fraternity in 1345. By 1373 it was known as the *Company of Grocers*. Nightingale shows spices were being used for medical treatment in the twelfth century rather than to flavour food. She points to the fact that whilst the term pepperer was adopted for merchants who imported Mediterranean goods on a wholesale basis, it was pepper that provided the highest profits and became a common international currency amongst merchants who traded internationally and over long distances.<sup>30</sup>

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<sup>25</sup> Lehman (2003, p289)

<sup>26</sup> Haksoz, Seshhadri and Iver, (2012), p xi-xix and Keay, (2008)

<sup>27</sup> Chaudhuri (2011), p 57-78, 131-152, 191-214

<sup>28</sup> Blonde et al. (2006), p 155-170, also see Krondl (2008)

<sup>29</sup> <https://www.british-history.ac.uk/london-record-soc/vol22/pp12-36> accessed 9 Feb 2025

<sup>30</sup> Nightingale (1985), p 123-132

The Grocers Company has been explored in the academic literature, although the focus is more on the workings of the company, personalities, organisational matters, disputes, engagements with the King and his court, laws, and regulations, rather than the operative grocery business. This could be because the records did not focus on the operational side of the business of spices, garbelling (the processing of dried spices and herbs to remove impurities) and groceries. While the personalities and organisational aspects are interesting, it does not add much to our understanding of the cultural and economic aspects of spices as far as usage and trade are concerned. The other worshipful societies relevant to this dissertation are the Worshipful Society of Apothecaries, Royal College of Surgeons, and Royal College of Physicians, as their work involved spices.<sup>31</sup> The medicinal aspects are indeed important, as spice usage was recommended and making medicines using spices had a big impact on the spice trade.

Nutrition and spices form a related topic. Ademan and Haushofer provide a good overview of the research on food as medicine and medicine as food and examine nutrition.<sup>32</sup> One of the earliest works that explored the area of nutrition in English food was by Drummond et al., where they evaluated the nutritional aspect of British food based on a report published in 1881 on food consumption and income spent on food, and later reports on data from the twentieth century. There is no mention of spices, although in an earlier section they repeat the trope of using spices to cover up the taint of spoilt meat by using strong seasoning.<sup>33</sup> Gentilcore explores the area of health and food in early modern Europe. He investigates the practice of “heating” spices to counteract cold and moist foods like fish, how darker foods like spices were not good for health and nutrition, and the rise of less spiced food in French cooking due to changes in dietetics’ philosophy from the seventeenth century. This drive to have less spicy food gradually spread from France to other parts of Europe, including England, from the eighteenth century onwards – driven partly by the view that less spicy food was healthier and more nutritious, certainly emphasising natural flavours over heavily seasoned flavours.<sup>34</sup> This is another reason why spices would be consumed by humans, as their restorative properties were well known; for example, spiced hot and dry food would nourish the phlegmatic but would not be appropriate for a person with a choleric disposition. As elicited by the review in this area, whilst the medieval and post-early modern periods have seen nutrition research, not much work has been done on nutrition in the early modern period.

On the other hand, food in early modern England has been researched extensively. These studies relate to cookbooks in English: *The English Table*, *The English Diet*, *Food as History*, *Global Food History* (where English food played a major part) and coverage of this topic in anthologies. Notaker compiled an excellent bibliography of early modern cookbooks, which was very helpful to review the full range of cookbooks available. He gives details of the books, which include brief information about the physical book, their contents, location, printer, and the type of recipes. The bibliography is arranged by language, and Chapter 5 looks at cookbooks published in English from 1500 to 1700 AD.<sup>35</sup> This period is a little earlier than that covered by this dissertation and skips a substantial part of English culinary history where the French influence really starts to establish itself.

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<sup>31</sup> Nightingale, P. (1995), Rees, A J. (1910), Rees, A J. (1923), Matthews, L. S. (1980), Copeman, W S C. (1980), Barrett, CRB, (2012), Dingwall, H M. (2005), Mortimer, I. (2009), Chaudhury, S, Morineau, M, (2007), Spufford, P, (2006) and Stobart, J. (2013)

<sup>32</sup> Ademan and Haushofer (2018)

<sup>33</sup> Drummond et al, (1991), p 36-38, 428-463

<sup>34</sup> Gentilcore (2016), p 19, 21, 40, 47, 70-72, 136, 139, 170

<sup>35</sup> Notaker (2010)



This bibliography contributed to the selection of books for review in the Food and Spices chapter 3. Notaker also reviews cookbooks thematically by exploring their history, naming convention for recipes, the form of recipes and how they changed over the centuries, the genre itself, how cookbooks were different for the rich versus the poor, vegetarian and Jewish cookbooks, and gender issues. While it is a broad canvas across much of the developed European world, he does review English cookbooks, speaking about how French cuisine influenced British cuisine, the Jewish cookbooks in England and vegetarianism.<sup>36</sup> Cooper reviewed English cuisine, mainly using cookbooks but also via literary channels from the medieval to the late early modern period. The perspective is more holistic, looking not only at the food being served but also at the cutlery, arrangement of the dishes, table service, the waiting staff and precedence of dishes.<sup>37</sup>

Flandrin et al. make a broad sweep of the history of food and in Part Six, explores the early modern period reviewing cookbooks in Europe including England, although it concentrates on continental Europe and French cookery. That said, the mention of spices is frequent, although the focus is on how spices were used more in French cookery than in English. He mentions that spices figured in 60-70 percent of the recipes, although the traditional spices of galingale, grains of paradise, mace, “spicnard” (spikenard), cardamom, anise, cumin, mastic, and the long pepper were no longer used, while cinnamon, ginger, and saffron were rarely used. The most common spices were pepper, cloves, and nutmeg and that too was used sparingly. Still, given that French cuisine had such an important influence on English cooking, this was an interesting contribution to the review.<sup>38</sup> Laudan takes a different perspective in her work. In Chapter 5, she explores how Christianity transformed the European and American cuisines from 100-1650 AD. Spices are indeed covered, but more from an imperialistic and religious stance (such as what monasteries did, or Christian missionaries practised, or religious practices) than any intrinsic investigation. In Chapter 6, she continues a similar theme of religious-lensed exploration of food in Northern Europe from 1650-1800 and notes that Catholic cuisine was replaced by French cuisine during this period before focusing on the growth of European empires in other parts of the world.<sup>39</sup>

Another edited work by Allen is an anthology of collected snippets from historical documents, cookery books, literature, and the like, grouped together in themes such as foodstuffs and cooking, eating at home and abroad, lavishness, austerity, and emotions. This is quite an eclectic collection, and the breadth of references is indeed very wide from the early modern period, but there is no treatment of spices; in fact, ‘spices’ do not even appear in the index.<sup>40</sup> A similar, very light rendition of medieval and early modern history of food is by Paston-Williams, but it is very slim and aimed more at National Trust kitchens, whilst also giving some relevant recipes.<sup>41</sup> Freedman in his edited volume, has addressed in chapters six and eight the question of why Europeans, whose cuisine has been highly spiced since the Roman Empire, completely lost their love of spices by the nineteenth century, mainly due to the influence of French cookery.<sup>42</sup>

Extant research has few in-depth treatments of the history of individual spices, centring more on broad-based spice histories, mainly from the spice trade perspective, a wide and deep

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<sup>36</sup> Notaker (2017), p68-69, 158, 224-226, 236-239)

<sup>37</sup> Cooper (1929)

<sup>38</sup> Flandrin et al. (1999), p 408-09

<sup>39</sup> Laudan (2015)

<sup>40</sup> Allen (1995)

<sup>41</sup> Paston-Williams (2012)

<sup>42</sup> Freedman (2019)

presentation of food items and a broad perspective of food in English diet and history. The area of food history is still in its infancy and methodologies are still being defined - a task that seems difficult given the broad, intense, deep nature of food and its relationship with human culture. Hence, a broad-based exploration of how just spices, one of the key reasons behind the age of discovery and the birth and growth of the British Empire, were treated culturally in the English early modern period is a fertile area for research, especially as spices vanished from almost all areas of British society at the end of the period, having played such an important role in the transformation of British society in the English early modern period. Our view of British culture as a stolid, not given to extremes of emotion, cold and placid culture, as represented by the idea that English food (read culture) was bland and merely offers roast beef, is actually not quite accurate, as this impression was based on the cultural mores that were extant only for about a century from 1850 to the 1950s. A classic example of this perspective is given in the book by Mrs Beeton on Household Management: the doyen of cookery and household management literature in this period wrote the defining book of its time, which went through a considerable number of editions. The cultural mores are well described in the introductory chapter—for example, that the mistress of the house should be a modest, prudent, careful matron—and notes that the behaviour of the English mistress of the house is very different from the European exemplar such as “*The French and other continentals have a habit of gargling the mouth: but it is a custom which no English gentlewoman should, in the slightest degree, imitate*”. The entire book is almost completely devoid of any references to spices; in fact, the index has one entry for spices, and that is spiced beef.<sup>43</sup> It was not just in England that this notion was considered; even in India in the early twentieth century Sen notes that English food was bland and gives an example from the 1924 E.M Forster novel, *A Passage to India*, where beef joints, legs of lamb, mutton saddles and boiled chicken were served in an echo of what was the tradition back in England. In fact, many current critiques of English cuisine still relate to it as bland.<sup>44</sup> This period was more of an aberration than the norm but is considered the historical standard. Prior to that, English food, medicine, and wider elements of culture were quite spiced. Perhaps the period after the Second World War, when highly spiced food became part of the culture, is reverting to the norm rather than postulating a new theme.

## 1.2. Methodology

The research methodology could not be based solely on economic history, such as event studies, statistical or just food history, as the use of spices in England during the early modern period was widespread across various human activities. It covered different times and ages, socio-economic classes, many areas of activity ranging from food to medicine, financial usage to art, and fashion to crime, as well as intertwined spheres such as food being medicine and medicine being food. The study must look at spices from a variety of perspectives. This section takes exploring food choice models as a starting point, since that is the most developed area of academic research and then proposes a unified spice choice model to frame the overall research methodology that encompasses all the various human activity areas that spice usage touches upon. It then explores how spice usage and buying behaviour were analysed from various perspectives.

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<sup>43</sup> Beeton, (1861), p547

<sup>44</sup> Sen (2014), pp 220-21

There are some conceptual models of food choice, which can assist in analysis of the adoption of spices. A conceptual model of food choice proposed by Tanis Furst and his team links over the human course of life with influences (such as ideals, personal factors, social framework, and food context) on a personal system leading to value negotiations. Sensory perception, health and nutrition aspects, monetary considerations, and quality feed into this, then lead to strategies and thus a paradigm concludes with choices about foods (both positive and negative). Researchers also noted other values, namely ethics, tradition, and familiarity, that influence food choice. Therefore, the choice of spices by humans can also follow the same model. See Figure 1<sup>45</sup>

FIGURE 1 - FOOD CHOICE MODEL (FURST ET AL. 1996)

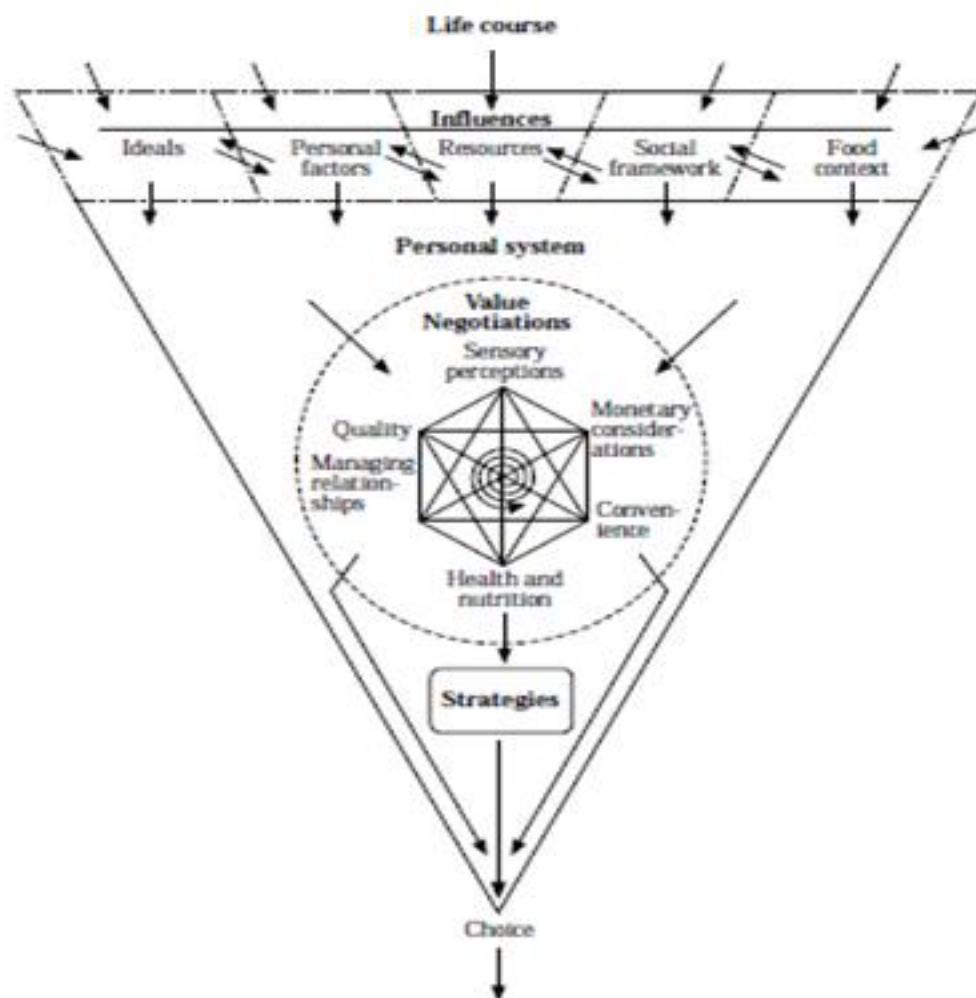


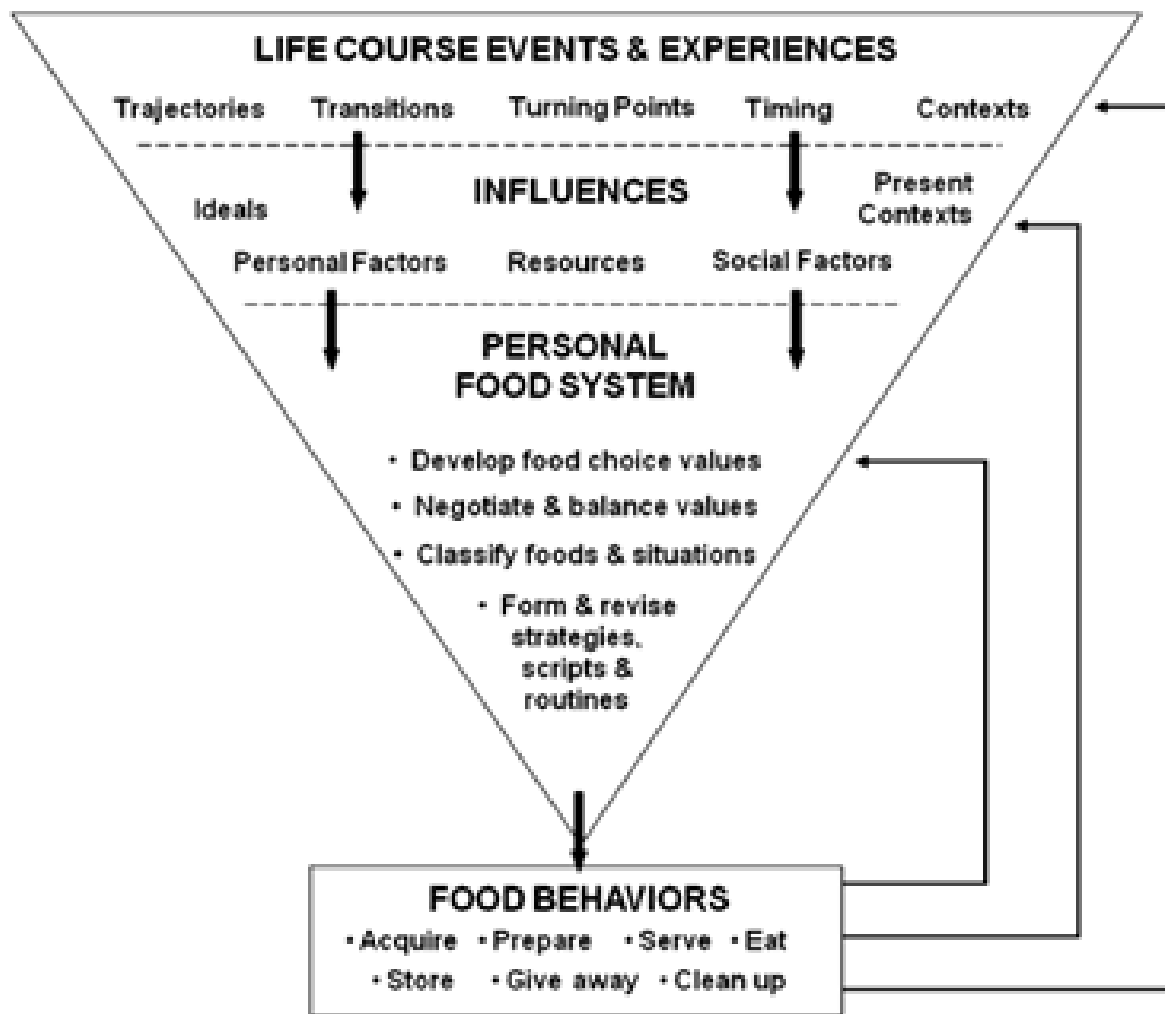
FIGURE 1. A conceptual model of the components in the food choice process.

A similar food choice model is proposed by Sobal and Bisogni in Figure 2.<sup>46</sup>

<sup>45</sup> Furst et al., (1996)

<sup>46</sup> Jeffery Sobal and Carole Bisogni (2009)

FIGURE 2 - FOOD CHOICE MODEL (SOBAL & BISOGNI, 2009)

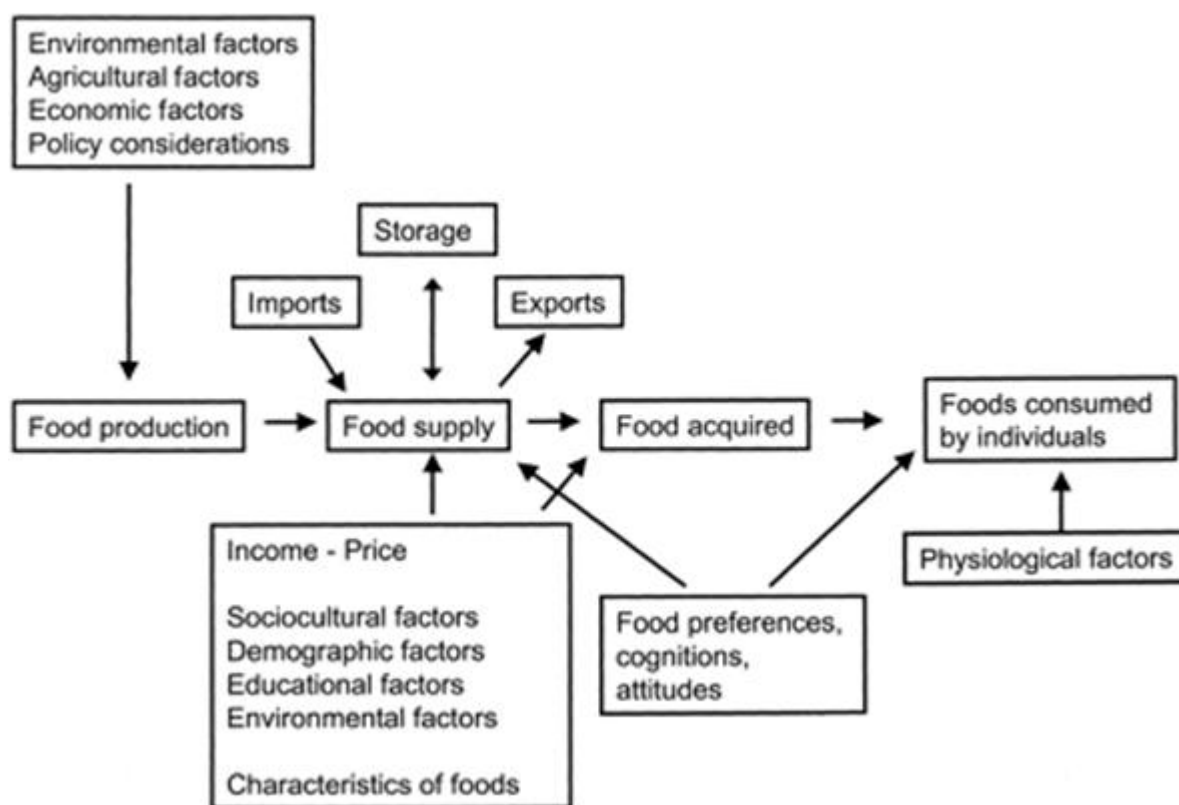


Whilst the food choice elements were reasonably similar, an interesting difference between the models is what happens after the choice has been made, in terms of food behaviours. In the second model, the behaviours are made more explicit in terms of acquiring, preparing, serving, eating, storing, giving away and cleaning up food. Hence, it is a richer model, as the spice usage will incorporate not only the choice of spices but also the follow-on cultural factors, such as the use of spices in medicine, clothing, and perfumes, as well. This model is also more appropriate for luxury goods, such as spices, whose behaviour will obviously be significantly different when compared to the other commodity types, such as bread or meat.

A broader food choice theory that incorporates macroeconomic dimensions is proposed by Krebs-Smith and Kantor.<sup>47</sup> While their paper researched fruits and vegetables, it extends the model back into the supply chain area by showing the relationship with environmental factors affecting food production, as seen in Figure 3.

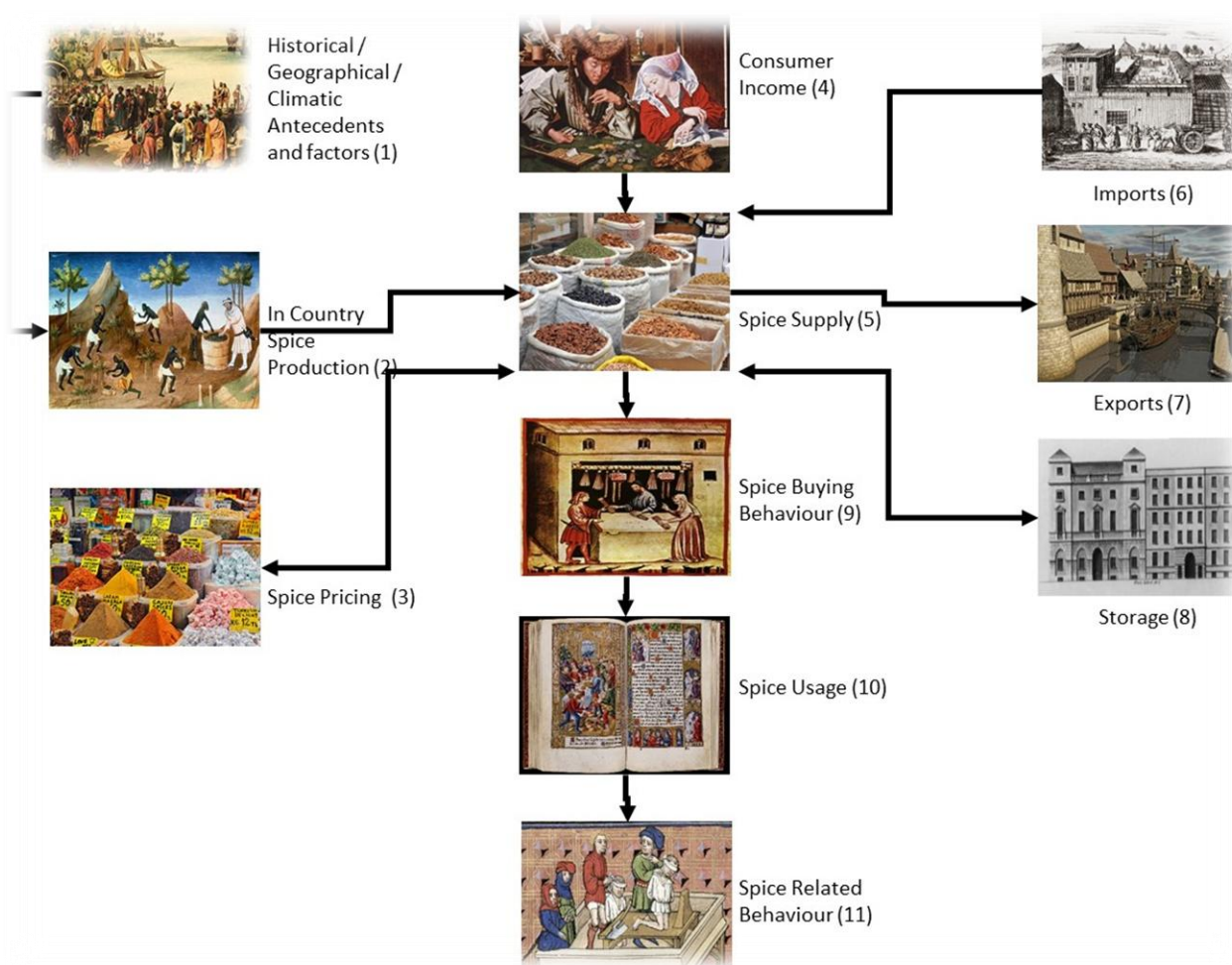
<sup>47</sup> Susan Krebs-Smith and Linda Kantor (2001)

FIGURE 3 - KREBS-SMITH & KANTOR FOOD CHOICE MODEL



Once combined with imports/exports/storage and economic factors such as income/pricing, the model incorporates the food supply chain into the food choice model, which then influences the choice of food and subsequent post-choice behaviour. Each of the above models are good, but there is no model which clearly includes the economic history, the supply, the demand, the breadth of human activity usage, behavioural aspects, cultural aspects, and the like. Hence, I have combined the three models referenced above, extended the coverage, and specifically adapted them to the spice field, leading to the final high-level spice choice model for this dissertation as shown in Figure 4. This therefore shows how the supply of spices, along with other factors such as consumer income, drives spice buying behaviour. After purchase, comes the factor of what and how spices were used and finally this drives human behaviour around spices, such as theft or using nutmeg graters in social situations for societal engagement.

FIGURE 4 - THE SPICE CHOICE MODEL



- **Factor 1: Historical/Geographical/Climatic Antecedents and Factors:** Each spice will include some background history of the spice itself, its geographic footprint, climatic requirements, and the varieties of spice. The data sources for this factor will mainly be secondary sources on each spice, providing a general background on the historical and environmental factors.
- **Factor 2: In-Country Spice Production:** These antecedents will have a factor on the in-country spice production. Of course, this will not apply to spices not grown in England, but for a spice like saffron, these factors need to be incorporated. Data will be dependent upon the availability of the historical saffron production and trading records in local town records at Saffron Walden.<sup>48</sup> For example, secondary market sources show some data availability. Spice pricing and mark-ups will be the next factor considered, as this has a two-way impact on the spice supply. As the primary source of spices in the UK during the period being studied was the East India Company (EIC), much of the analysis will focus on how the spices were produced, transported, sold, and managed.
- **Factor 3: Spice Pricing:** The EIC records in the India Office Library provide some elements of pricing as a source of primary data, such as that used by Chaudhuri and Rogers.<sup>49</sup> Secondary sources of data have been identified, such as Freedman and Braudel who provide spice prices

<sup>48</sup> Francis, (2011)

<sup>49</sup> Chaudhuri (1978) & Rogers (1887)

from various localities and channels, such as values as declared to the port authorities and recorded as such in the port registers, wholesale, and retail values.<sup>50</sup>

- **Factor 4: Consumer Income:** Consumer income values will also be considered. As spice usage is perceived as discretionary, the values of specifically discretionary income will be deliberated. Some elements of socio-economic boundaries may be required. Household budgeting records, letters detailing purchase prices, lending records and pawnbroker records are also worth exploring.
- **Factor 5: Spice Supply:** Spice supply, imports, exports, and storage will be incorporated. As for spice supply, the information gleaned from the previous points will, therefore, give a more comprehensive picture in the two centuries in question from the internal dimension.
- **Factor 6: Imports:** Imports are the first external factor affecting the spice supply and will be sourced from India Office records and Port Customs Records.
- **Factor 7: Exports:** Export information will need to be determined potentially from port records or ship manifests. Moreover, parliamentary records, the Guildhall Library for merchant papers and customs records are other sources for this information.
- **Factor 8: Storage:** This is the final external factor influencing food supply. Some data for storage can be gleaned from the India Office records and the EIC which had significant warehousing facilities in all its buildings.<sup>51</sup>
- **Factors 9, 10, 11: The last three factors are spice buying behaviour, spice usage and spice-related behaviour.** These will investigate the consumers' purchase behaviour for a variety of purposes as noted. From where the spices were purchased and how, the effects of their retail prices, the supply chains, and the rationale for the purchase. Spice usage will examine the usage factor (across food, medicine, religion, magic, and art). Braudel mentions that "cooking books show that the mania for spices affected everything: meat, fish, jam, soup and luxury drinks. Who would dare cook game without using 'hot pepper' as Douet d'Arcy counselled as early as the beginning of the fourteenth century?"<sup>52</sup> Spice-related behaviour explores any additional aspects relating to spices and British socio-cultural impact, such as mentions in poetry, plays, and books, non-standard uses such as aphrodisiacs, alchemy, and religious ceremonies. Other cross-spice factors, defined as the usage of a combination of spices rather than one individual spice, will also be considered. Finally, other behavioural aspects such as crime and advertisements relating to spices will also be examined.

The last three factors will be explored from various historical perspectives. The first perspective is anthropological history, to determine the use of spices as a social and cultural experience. With a long history of anthropologically based historical research relating to food dating back to 1875, in a modern-day recognisable academic research manner relating to when the first research study was published, there are some key takeaways to be adopted for this research.<sup>53</sup> As Dirks and Hunter state, the key to understanding food from an anthropological perspective is that it must be holistic, meaning to look at eating and drinking from a domestic, economic, political, and spiritual dimension.<sup>54</sup> This evaluation is based not just on single communities and organisations, but

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<sup>50</sup> Freedman (2008), p234 and Braudel (1981), p224

<sup>51</sup> Chaudhuri (1978)

<sup>52</sup> Braudel (1981), p221

<sup>53</sup> See for example, Bourke, J. G. (1875); Bourke, J. G. (1895) and Smith, W. R. (1889).

<sup>54</sup> Dirks, R, Hunter, G (2013)

also at national and regional food systems level.<sup>55</sup> For example, Fischer and Benson evaluate broccoli and how Guatemalan broccoli was imported into the USA to become an important food item based on concerns of “eating right,” despite challenging environments for broccoli farming in Guatemala.<sup>56</sup> Wilk combined various ethnographic, archaeological, and historical data to show how global processes influence local food traditions anchored in Belize.<sup>57</sup> Others, such as evaluations for the USA, Middle East, and South Asia, have been similarly undertaken on a holistic basis.<sup>58</sup> Likewise, Higman undertook a story of the food culture, behaviour, and practices in Jamaica, from the earliest times to the current fast-food practices.<sup>59</sup> Hence, this perspective has been applied throughout the research by looking at it holistically.

From a cultural history perspective, Braudel’s magisterial work on Mediterranean societies, trade in food supplies, and maritime trade for procurement of food was also adopted to see how spices were used in economic and social life.<sup>60</sup> Braudel, of course, belongs to the Annales School and his way of looking at different/layered *durée’s* or *mentalities* as undertaken by others is adopted in this dissertation by taking the long early modern period to ensure the slow-moving cultural movements were captured and layering in various aspects such as economics, food, medicine, crime, fashion and the like.<sup>61</sup>

These movements are imperceptible and are very slow moving – especially when one considers the change in something as fundamental as food or medicine. Changes to such fundamental human culture habits would only happen through wide, long and diffuse interjections and cannot be done just based on point events, conscious actors or even revolutions. There are more continuities in human history than discontinuities and these continuities in the deepest structures of society as food habits or medicines were central to understanding history. This could be the reason why his book *Civilisation & Capitalism in the 15<sup>th</sup> to 18<sup>th</sup> Century* starts off with food/drink in Volume 1 for almost half the book to set the scene for his hypothesis. He quotes Maurizio to say, “A thousand years bring scarcely any changes in the history of diet”.<sup>62</sup> His graphical way of showing food prices and the economic analysis was adopted in Chapter 2 – The Economic History of Spices.<sup>63</sup> In particular, he says that Europe had an old passion for pepper and spices, although the spices which were preferred did change somewhat over time. Usage dropped a bit after the Romans but by the twelfth century – use of spices was in full flow across the continent – being used in meat, fish, jam, soups and luxury drinks. He posits that the use of spices started to drop as the supply increased, it started being available widely and no longer a symbol of wealth and luxury. He also suggests that other luxuries such as coffee, chocolate, alcohol and tobacco supplanted the use of spices or the fact that new vegetables such as asparagus, spinach, lettuce, peas, cauliflower, tomatoes started to vary western diets and reduced the importance of spices. He

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<sup>55</sup> Such as Goode, J G, K Curtis; J Theophano, (1984); Goode, JG, J Theophano; K Curtis. (1984); Gutierrez, C P. (1984); Gutierrez, CP. (1992). Flynn, K. C. (2005); Flynn, K. C. (2005) and Bestor, T. C. (2004)

<sup>56</sup> Fischer and Benson, (2006)

<sup>57</sup> Wilk, (2006)

<sup>58</sup> Brown and Mussell, (1984); Humphrey and Humphrey, (1988); Zubaida and Tapper, (1994); Khare and Rao, (1986)

<sup>59</sup> Higman, (2008)

<sup>60</sup> Braudel, F. (1972 & 1981)

<sup>61</sup> Green and Troup (1999)

<sup>62</sup> Ibid Vol 1 p105

<sup>63</sup> For example, see his treatment of wages and the price of rye in Gottingen and in another example – plotting the real wheat prices - Ibid Vol 1 p134-135



concludes by conjecturing that the reduction of meat consumption meant that the rich adopted a simpler style of cooking, comparing French cooking which became simpler far before German or Polish cooking hence the latter kept on using spices for longer. That said, he says that this is purely conjecture as no good data is available.<sup>64</sup>

Based upon these prior works, the research hypothesis similarly took an approach to evaluate the role of spices from food as well as from a comprehensive approach to human activity areas. Burnett's methodology of analysing food consumption (by calculating the frequency of the individual ingredients and dishes and comparing over time) was adopted to help explain how consumption of spices can be measured and tested.<sup>65</sup> This multi-methodological approach of using a combination of primary sources, economics, and data series, graphical and tabular analysis was used in the economic history of spices chapter to determine how the economics of spice supply and consumption underpinned its usage in the early modern period. More relevantly, Schivelbusch explores luxury imports such as tea, coffee, chocolate, tobacco, and spices to Europe over this period and analyses their consumption. Whilst the focus is purely on food, it is noteworthy that a similar multi-disciplinary methodological approach has been used before.<sup>66</sup> The multi-disciplinary approach studies and reviews the economics, anthropology, and food history based upon receipt (recipe) books and memories.

One major exclusion needs to be explained. Quite often, the cultural history of food items included an analysis of both their source and destination, typified by Mintz's work—the closest available academic methodological research work on spices. Mintz analyses how sugar was produced, where it was consumed and the historical linkages thereof.<sup>67</sup> In this case, the focus is primarily on consumption in England, and to a lesser degree, in the production of spices in Asia and elsewhere, for pragmatic scope reasons. However, some source elements are reflected, such as spice production costs in Asia, food recipes from EIC employees who returned to England and medical recipes using spices for EIC doctors in India; otherwise, the research scope would be far too large. Regardless, the lack of local data and records, different languages, and other research limitations in South and South East Asia limited the focus purely on England.

The methodology used in this dissertation was also significantly influenced by Thirsk's work on food in early modern England.<sup>68</sup> While her book covers all types of food, she draws a similar broad-brush approach, ranging from agriculture, fashion, food, consumption, and supply chains to various socio-economic levels to give a broad, holistic perspective of food usage. She uses primary sources such as recipe and receipt books, manuscripts, letters, and probate records to show the use of food items. She displays that there are two worlds in this age when it comes to food: the first relates to food writers who published cookery books, and the other world, which comprises the households—whose existence and experience in the world of food is exhibited via receipt books, fiction, and artefacts (such as nutmeg grinders and table ornaments), letters, and the like. She traces the increased availability of food and the supply chains, how food was represented in print, the science behind food, the impact of war on food choices, the commercial world of food production and sales, dietary and consumption patterns and then digs deeper into some common food groups such as bread, meat, fish, dairy products, vegetables, fruit, drinks, and condiments, including sugar and

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<sup>64</sup> Braudel (1979) p220-224

<sup>65</sup> Burnett, (1979)

<sup>66</sup> Schivelbusch (1992)

<sup>67</sup> Mintz, (1986)

<sup>68</sup> Thirsk, (2009)

spices. This multi-disciplinary methodology, including economics, anthropology, agricultural studies, art history, gender studies, literary reviews and cross-cultural studies across different countries, has also been adopted for this dissertation.

As Albala writes, the study of cookbooks as a primary source is not restricted to cookery per se. He recommends using cookbooks to evaluate gender roles, the social meaning of ingredients, cooking methods or modes of service, and to trace food materials as they emerge from global trade. This guidance is only partially adopted, as gender roles and social meaning are not within the scope of this research, although this is an avenue for future research. He also looks at culinary history from an archaeological angle and suggests that to make sense of an old recipe, one must cook it using original ingredients, historic implements, and fuel sources in period utensils.<sup>69</sup> Whilst this dissertation uses cookbooks to identify spice usage and trace food materials, especially in Chapters 3 and 4, the recreation of old recipes with spices is considered beyond the scope of this research.<sup>70</sup>

Albala recommends being clear on what we are interested in learning. In this case, it is to identify the ingredients and quantum of spices that are being used. He recommends a quantitative approach that incorporates tabulating and quantifying the recipes that contain those ingredients and using weights and measures as an added benefit. He warns that cookery books were frequently starting points, as what was written may not have been what was cooked. He also warns that historical cookbooks were aimed at wealthy readers, to the exclusion of other socioeconomic classes; hence, common/lowly dishes may not have been incorporated. Furthermore, he recommends checking other contextual sources such as cookery images in paintings, museum artefacts and furniture and fittings in old homes, suggesting that this enables an understanding of why those recipes were created: sometimes the rationale for the dish might have been for a grand event or for a family dinner. Also suggested are techniques to review how ingredients were combined and what sauces were used.<sup>71</sup> These methodological guidance elements, such as quantitative research, studying imagery, cross-referencing cookery books with literature and letters were incorporated in this research, especially in Chapter 3.

In particular, the analysis of food and art will follow the methodological paradigm used by John Varriano to analyse Italian Renaissance art. He analyses art from the perspective of symbols, sacred and sensual, exploring how art was created (in terms of using food items such as eggs and spices – e.g. saffron and turmeric) and includes food as art, such as sugar sculptures.<sup>72</sup> Nygard summarises the methodological techniques and recommends careful visual scrutiny of art objects to analyse the placement of objects and to determine their properties (colour, line, texture, and composition). Using a still life painting as a case study, Nygard suggests how to analyse the painting.<sup>73</sup> In this dissertation, spices in art will be analysed from both the imagery perspective (to see if spices were reflected in art, the logistics of spice sales, such as apothecary shops in paintings and art in Chapter 3) as well as literally in terms of how spices were used (such as saffron and turmeric for creating paints and inks, spices to perfume clothes in Chapter 4). Many expensive dishes containing spices, such as stuffed peacocks, were works of art in themselves and were presented to the high table as entertainment besides, of course, eating them.

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<sup>69</sup> Albala, (2013)

<sup>70</sup> See McFadden, C, (2012) and Paston-Williams, S, (2012).

<sup>71</sup> Albala, (2013)

<sup>72</sup> John Varriano (2009)

<sup>73</sup> Nygard (2013)

The other perspective on looking at objects is to learn from the material culture sociological framework. Griswold defines cultural objects as “shared significance embodied in form.”<sup>74</sup> There are two aspects to this definition and the relationship: the first one is the fact that there is a cognitive idea embedded in the object and a material form where the idea is embodied in it. Both aspects are also interlinked. As the dissertation primarily in Chapter 3 and 4 shows, clothes, spice dishes, nutmeg graters and the like have a cognitive meaning to the object besides the medium itself and both have a deep interrelationship with each other. Berg examines the consumption of luxury goods in the eighteenth century through the lens of material culture frameworks. The objects range from furniture to fashion to architecture, vases and silk.<sup>75</sup> To understand the cultural history of spices and following McDonnell,<sup>76</sup> the Material Culture framework offers a good framework for analysing these objects by evaluating the medium, the shared meaning, how the types of objects are categorised while tokens change the meaning of the types and how these objects are central to culture, providing grounds for action.

In terms of methodology, Fitzpatrick’s literary criticism on food gives a good overview of how various scholars have approached this area.<sup>77</sup> Applebaum undertakes a similar study, albeit a much broader review of how literature referred to food, from the fifteenth century to the early eighteenth century. His perspective attempts to explain how and what the then-contemporary reader would have understood from the various references to food in cookbooks, dietary literature, and works by Shakespeare and Milton.<sup>78</sup> Regretfully, as Fitzpatrick points out, much of the food-related literary efforts happened after the nineteenth century, which is outside the period of this research study. There are no formal methodological devices available, but Fitzpatrick recommends the interrogation of literary sources by asking a research question and developing the thesis around it. In this case, the research question is specific to the use of spices in cookery and how spices were considered as an allegory to other traits (such as nationalistic, anti-French, anti-rich/wealthy, gluttony as seen in Chapter 3).

Grumett explores food and theology and suggests using methodological aspects from biblical studies, theological engagements with culture and with ritual and liturgical studies.<sup>79</sup> In other words, to understand the relationship between food and religion, one must undertake a textual analysis of the scriptures and related publications to determine the religious underpinning of food consumption, along the lines of MacDonald’s work identifying how food represented ancient Israelites’ religious identity.<sup>80</sup> Similarly, Grumett explored how Christian food laws were implemented to differentiate Christians from pagans. This, especially in a religiously charged country like England, where the Anglican/Protestant/Catholic pressures were extant well into the nineteenth century, is very apposite, particularly if food and spice usage differentiated the identity. For example, reaction against the opulence of some Christian traditions could lead to a reduction in the use of luxury foods and condiments like spices from a poverty, simple living, and austerity perspective.<sup>81</sup> Whilst spice usage is present in many other religions such as Islam, Hinduism and

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<sup>74</sup> Griswold (1986), p5

<sup>75</sup> Berg and Eger (2003) and Berg (2007)

<sup>76</sup> McDonnell (2023)

<sup>77</sup> Fitzpatrick, (2013)

<sup>78</sup> Applebaum, (2006)

<sup>79</sup> Grumett in Abala, (2013)

<sup>80</sup> MacDonald, (2008a, 2008b)

<sup>81</sup> Muers and Grumett, (2008)

Buddhism (liturgy, rituals, and diet), only Christianity (with its major sects) will be considered, as that was England's main religion during the early modern period.

Religion had a significant impact on English food choices, as noted by Grummet and Laudan.<sup>82</sup> For example, Christians abstained from red meat on Fridays and in the Roman Catholic Church, during Lent, monks and priests completely avoided it and laypeople did not eat it on certain days. Saints' days had dietary obligations and frequently fish replaced meat. The relevance of this is not so much the base material (meat or fish) but the accompanying sauces. Laudan traces the development of world cuisine from the perspective of religion, showing how Buddhist, Muslim, Christian and other religiously orientated frameworks shaped and drove the development of cuisine. Furthermore, there is evidence that food materials formed part of the liturgy, and that approach of analysing Christian rituals will be adopted, following McGowan's example, to examine early Christian rituals with respect to food and drink.<sup>83</sup> These concepts will be applied in Chapter 3 and Chapter 4.

There is no single research methodology available that can cover all these human activities; hence the research question will be answered using a multi-methodological approach from history, literature, anthropology, economics, art history, and food choice theory adapted for the use of spices in the early modern period.

## 1.3. Data Collection

### 1.3.1. Economic History of Spices

To determine the economic history of spices, price history, return history, consumption data, and wage history will be studied. The following sources of primary and secondary data will be explored from the EIC Accountant General Records & Cash Journal at the India Office Collection in the British Library; ledgers of imports and exports from the records of the Boards of Customs, Excise, and Customs and Excise, and HM Revenue and Customs at the National Archives; records of the Pepperers Company in the Guildhall Library; commodity prices in *A history of agriculture and prices in England: from the year after the Oxford parliament (1259) to the commencement of the continental war (1793)* by James E. Thorold Rogers;<sup>84</sup> Lord Beveridge's extension to the Rogers' dataset and then a further extension by Gregory Clark;<sup>85</sup> *English Overseas Trade Statistics* by Elizabeth Schumpeter;<sup>86</sup> Ralph Davis's *English Foreign Trade Statistics*;<sup>87</sup> *SE Asian Exports* data by David Bulbeck et al.,<sup>88</sup> VOC data by Pim de Zwart,<sup>89</sup> East India Dataset collected by Huw Bowen,<sup>90</sup> European State Finance Database; English Economic Indicators 1209-1816; Spice consumption data in *Standards of Living in the Later Middle Ages* by Christopher Dyer, from the wills and probate

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<sup>82</sup> Grummet (2011) and Laudan (2015), p215

<sup>83</sup> McGowan, (1999)

<sup>84</sup> James E. Thorold Rogers (1887—data across the full set of volumes)

<sup>85</sup> <http://faculty.econ.ucdavis.edu/faculty/gclark/data.html>, Accessed 2020-07-07 (Archived at <https://web.archive.org/web/20200428052435/http://faculty.econ.ucdavis.edu/faculty/gclark/data.html>)

<sup>86</sup> Elizabeth Schumpeter (1960)

<sup>87</sup> Ralph Davis (1954)

<sup>88</sup> David Bulbeck et al. (1998)

<sup>89</sup> Pim de Zwart (2016)

<sup>90</sup> Huw Bowen (2007)

records;<sup>91</sup> Carole Shammass dataset on the pre-industrial consumer in the USA and England, which has data on country shops and supply chains;<sup>92</sup> and finally the Jon Stobart dataset on grocers, their buyers and their stocks.<sup>93</sup> The database used for data on crime, advertisements and related matters was the Old Bailey Online Records for crimes involving spices and the British Newspaper Archive.<sup>94</sup> The conclusion provides a fuller discussion of these datasets and the challenges faced in using them.

### 1.3.2. Food and Spices

The primary source of information on how spices were used in cuisine came from extant published recipe books and household receipt books. The selection of these books was based on their popularity based on the considerable number of editions, referred to by contemporary authors or indeed plagiarised by many (based on the number of editions—multiple editions were an indicator of their popularity).<sup>95</sup> Selected books were analysed, and the use of spices was tabulated to determine the frequency and use of spices in those selected recipes. Food-related art was more difficult to source. Some exhibition publications, such as the National Gallery Exhibition on “*Feast for the Eyes*,” were very useful, as they published a collection of paintings related to food that were then analysed based on the Albala, Varriano, and Nygard recommended methodology.<sup>96</sup> Certain artists focused on food as a representation of current society, such as Thomas Rowlandson, the famous satirist on modern living.<sup>97</sup>

### 1.3.3. Medicine and Spices

As will be demonstrated, during this period, food was looked upon as medicine; hence, a substantial part of the primary data sources came from recipe books, noted in the previous section, relating to food and spices. In addition, medical books, physicians’ notes, and apothecary manuscripts from the Wellcome Collection for the sixteenth–nineteenth century period were used.<sup>98</sup> Spice-related artefacts, such as medicine jars and medicine cupboards from museums, were also reviewed.

## 1.4. Chapter Plan

The thesis starts with an in-depth economic analysis of the spice trade with reference to England during the early modern period in Chapter 2. It gives a brief historical background to the spices, starting from ancient times, then Roman Britain, then the long interregnum between the collapse of

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<sup>91</sup> Dyer, (2000)

<sup>92</sup> Carole Shammass (2008)

<sup>93</sup> Jon Stobart (2013)

<sup>94</sup> <https://www.oldbaileyonline.org/> archived at: [/web/20200718162409/https://www.oldbaileyonline.org/](https://web/20200718162409/https://www.oldbaileyonline.org/) snapshot taken on 18/7/2020, <https://www.britishnewspaperarchive.co.uk/>, archived at [/web/20200718162316/https://www.britishnewspaperarchive.co.uk/](https://web/20200718162316/https://www.britishnewspaperarchive.co.uk/): accessed 18/7/2020

<sup>95</sup> <http://www.bl.uk/learning/langlit/texts/cook/cookery2.html>. <http://www.webcitation.org/73zZFS1Kk> accessed 17 Nov 2018

<sup>96</sup> Albala (2013), Varriano (2009), and Nygard (in Albala, *ibid*, p169-76)

<sup>97</sup> Other examples include, Payne, M, Rowlandson, T, and Payne, T. (2010).

<sup>98</sup> <https://wellcomelibrary.org/collections/digital-collections/recipe-books/>, [/web/20200709142845/https://wellcomelibrary.org/collections/digital-collections/recipe-books/](https://web/20200709142845/https://wellcomelibrary.org/collections/digital-collections/recipe-books/), accessed 9 July 2020

the Roman Empire to Columbus, the Portuguese opening of the sea trade to Asia, followed by the Dutch EIC, the English footprint on the spice trade prior to the English EIC, ending with the EIC itself (1600-1858). The chapter analyses the pepper trade, EIC records, and data from the customs and port journals. It explores the storage and warehousing of spices. The EIC sales, exports and re-exports of spices are investigated. The domestic supply chain from London and other ports to the regional cities, smaller hamlets and shops/peddlers is explored. Moreover, the demand and consumption of spices are studied and compared with the wages and agricultural prices during this period. The chapter also explores how spices were used as financial assets, as proceeds/reasons for crime and how spice advertisements worked to help sales of spices in England. Finally, the local spice price formation is analysed, ending with linking the analysis back to the Food Choice Model as explained in the methodology.

Chapter 3 analyses how spices were used in English food over this period to illustrate how the increase in supply influenced spices used in English food as per the research question. A brief overview of how spices were used before 1500 is given, followed by an analysis of the food history of spices in 1500-1800. Multiple recipe books of this era are analysed qualitatively and quantitatively to see the types, quantities, and combinations of spices. Art of this period is also explored to see how food and spices were represented in paintings and literature as evidence that food on English tables used to be quite highly spiced for people who could afford such spices. Finally, the impact of French culinary imports, the rise of nationalism, and changes in food tastes after the Battle of Waterloo in 1815 is shown to have dramatically changed British usage of spices for the worse.

The use of spices in medicines and other uses is the topic of Chapter 4. Letters, recipes, and household receipt books give evidence of the varied and extensive (and imaginative) use of spices as household remedies, including in the treatment of livestock. Whilst the previous sections focused on self-diagnosed and medicated recipes by householders and the lady of the house, the focus then moves to how physicians thought about spices, their fundamental scientific framework and how the Galenic theory of humours drove spice usage to address medical issues. The other major participants within this area were the apothecaries, mixing the medicines. A thematic review of spices by disease is conducted. This focuses on two medical conditions with a long history, namely poisoning and sexual impotence. The thesis traces the use of spices in various medicines through the early modern period and looks at why, towards the end of the period, medicinal prescriptions changed, and spices started to disappear from the pharmacopoeia and apothecary shelves. Finally, an analysis of common scientific discoveries and inventions is undertaken, which shows how the basic understanding of the human body, illnesses and remedies changed, meaning that spices were no longer used in medicine from circa 1850. This chapter also includes how spices were used in religion, magic, perfumes, fashion, and clothing. The dissertation ends with the conclusion where the answers to the primary research question are enumerated across the variety of cultural factors.

## 2. The Economic History of Spices

### 2.1. Introduction

As per the spice choice model methodology laid out in the previous chapter and shown below, this chapter provides an economic history of spices in England, starting with a brief overview of the usage from the late Iron Age to the Classical Roman period (40 AD to 410 AD), then moving to the Medieval period of the fifth century AD to roughly 1500 AD, and finishing in the early modern period of the fifteenth century AD to the beginning of the eighteenth century when the end of the EIC was nigh. The sections analyse the economic history of prices, production, imports/storage and exports, pricing, consumer income, purchasing behaviour, consumption, and supply chains for the early modern period of English History.

A formal definition of spices is: *“any dried, fragrant, aromatic, or pungent vegetable or plant substance, in the whole, broken or ground form, that contributes flavour, whose primary purpose is food seasoning rather than nutrition, and that may contribute relish or piquancy to foods or beverages....Spices may come from dried Arilla, bark, buds, flowers, fruit, leaves, rhizomes, roots, seeds, stigmas and styles, or the edible plant top.”*<sup>99</sup> Given the difficulties in clearly isolating herbs from spices, this dissertation uses them interchangeably in the broadest sense. The International Organisation for Standardisation committee<sup>100</sup> which addresses standardisation in the field of spices, herbs, and condiments, lists seventy legally recognised spices, although the primary focus of this dissertation is on common spices such as saffron, cardamom, clove, pepper, chilli, nutmeg, and mace.

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### 2.2. Spices in Pre-Early Modern England

Vindolanda was a Roman auxiliary fort south of Hadrian's Wall, originally constructed around 65 AD. It remained in existence until AD 300, when its abandonment occurred. Wooden tablets were preserved, and tablet number 87.622 with pepper was mentioned in vulgar Latin.<sup>101</sup> The wooden tablets found in Vindolanda display the first documented usage of spices in England and evidence of intercontinental trade.<sup>102</sup> They mention various food elements, in particular garlic, garlic sauce, *condimenta* (could stand for spices) and pepper. Based upon excavations at Bearsden on the Clyde, herbs and spices such as opium poppy, wild celery, coriander, and dill were used by legionnaires in Roman military forts. Apicius, a collection of Roman cookery recipes compiled in the fourth century AD, gives an indication of the lavish cuisine with liberal application of spices that was prevalent in Roman high society.<sup>103</sup> By the end of the fourth century AD, Roman Britain had fallen, bringing the classical period to a close; the Saxon invasion was in full flow, launching

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<sup>99</sup> Farrell, (1990), p70

<sup>100</sup> <https://www.iso.org/committee/47912.html>, archived at <https://web/20200801142717/https://www.iso.org/committee/47912.html>, accessed 1 August 2020.

<sup>101</sup> Bowman and Thomas, (1983)

<sup>102</sup> Dery, (1996), p89-90

<sup>103</sup> Vehling, (1977)

the medieval period. Some isolated instances to spices are seen after this period but the next major documented proof of use of spices was seen in the *The Forme of Cury*, a collection of medieval English recipes, written in 1390 by the Chief Master Cooks of King Richard II.<sup>104</sup> Spice usage is mentioned in the book, such as mace and cloves. Given that mace, nutmeg, and cloves all come from the Moluccas in Indonesia, it proves that the land spice route was active during this period. German merchants in London were paying their customs duties in pepper during the reign of King Aethelred II (978-1013 and 1014-16 AD).<sup>105</sup> One of the oldest and still extant guilds is the Guild of Pepperers,<sup>106</sup> formed in 1180 AD, which then morphed, on 12 June 1345 AD, into the Worshipful Company of Grocers, a company of twenty-two persons who were pepperers.<sup>107</sup>

FIGURE 5 - COAT OF ARMS OF THE WORSHIPFUL COMPANY OF GROCERS



The coat of arms of the Worshipful Company of Grocers includes cloves within the shield. A camel, on top, loaded with goods-an obvious reference to the spice trade carried overland-is seen in Figure 5. Despite significant disruption in supply and trade routes due to plagues, crusades, papal bans and sanctions, the use of spices grew rapidly, as evidenced by an increase cookbooks and recipe books from 1180 onwards.<sup>108</sup>

During the Venetian and Portuguese periods, most of the pepper was sourced from India and, to a lesser extent, from Southeast Asia. Towards the end of the fifteenth century, two major history-changing voyages were planned and executed. The first was by the Portuguese, who were pushing further and further into the Eastern Sea route to India around the Cape of Good Hope, and the second was by Christopher Columbus, who wanted to explore the Western route across the Atlantic Ocean to the Indies. For the purposes of this research, the trade in spices from/to the

<sup>104</sup> Hieatt and Butler, (1985)

<sup>105</sup> Turner, (2004)

<sup>106</sup> Nightingale, (1995)

<sup>107</sup> Heath, (1854), p40

<sup>108</sup> Notaker, (2010)



Americas is not included in the scope, as most spices came from the East to England. In the next section, the Portuguese era, which opened a new source of supply of spices to England, will be explored.

## 2.3. The Portuguese Era

The European spice trade immediately before the advent of the Portuguese sea route to India was primarily a Venetian system. The Venetian cargoes were unloaded in Venice and then repackaged and reloaded on the Venetian galleys, (known as the Flanders galleys) which sailed due west to Bruges and the port of Southampton in England. The first documented shipment of 380 tons of Calicut-origin Portuguese spices to Falmouth was in January 1504. In a letter of 17 January 1504, Hironimo di Ca' da Pesaro announced the arrival at Falmouth of five Portuguese barks bearing 380 tons of spices from Kozhikode.<sup>109</sup> Given that the first voyage of Vasco da Gama came back to Portugal in 1499 with just eight tonnes of spices, to have established a network and been able to sell 380 tonnes in just five years to one small market in England was indeed a sign of astonishing progress. By the end of the century Europe had already formed a single unified market for the sale of pepper.<sup>110</sup>

The landed price of spices in Southampton or Antwerp was significantly higher than the original price paid to the farmer in India or in the Moluccas. At every transshipment point from the Moluccas to Southampton/Antwerp, various rulers, marketplaces, shippers, and insurers added various levies, fees, charges, and duties on the cargo.

O'Rourke and Williamson researched the Portuguese impact of the trade on European markets and the movement of prices pre- and post-1503, which tipped the supply from land to the sea route.<sup>111</sup> The graphical axis is measured differently; therefore, even if it seems like there was more volatility in the non-English markets, it is the opposite, as the pepper prices in the Netherlands, Flanders, and Vienna are operating on a much smaller scale. Despite that, one can see a steady price rise, which leads to the conclusion that the land route supply remained constant, as well as constrained, while demand was rising with greater publicity, trade, and knowledge of the use of pepper. Higher demand and constrained supply will lead inexorably to increasing prices.

They also show the real pepper prices post-1503 and clearly shows a reduction in pepper prices over the several decades following the opening of the Portuguese sea trade. This could be due to many reasons. If the demand started to level off (and there is no straightforward evidence of this), then the increased supply from Portuguese sources would depress prices. Even if demand were growing at a similar rate, and if the supply increased faster, it would lead to prices falling. This is proven by reports that in 1611, the European market was judged to be no more than 30,000 quintals (3.4 million lbs), but soon after, the Dutch EIC, called Vereenigde Oost-Indische Compagnie (VOC), was ordering the equivalent of 4.2 million to 6.0 million lbs.<sup>112</sup> One other reason why the price of pepper fell across Europe could be the replacement of pepper in the diet after the introduction into Europe of chillies by Columbus and his Spanish successors. Other reasons for the price reductions could be the reduction of costs. The land route was expensive due to the addition of various fees, duties, and charges. The sea route reduced the costs

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<sup>109</sup> See the calendar of state papers. Venetian, vol. I, no. 838, p300, dated March 9, (1504) and Tawney, R H, and E Power, (1924)

<sup>110</sup> Braudel (2008), p547-48

<sup>111</sup> O'Rourke and Williamson, (2009)

<sup>112</sup> Wake, (1979)

significantly. He shows the prices and mark-ups for monopoly spices, 1608-1800.<sup>113</sup> The sheer difference between the purchase and the landed price is extraordinary and mostly accruing to European shippers and merchants. He also shows the spikes in pepper prices as the spice travelled via various routes.<sup>114</sup> His graphs illustrate the significant increases in cost incurred during the final leg of the supply chain. While there is no information on British prices connected to the Portuguese or Venetian supply, it is logical to assume that the jumps continued in Southampton or London, where they landed and/or were sold. This, however, does not mean that prices remained high moving forward in time. This behaviour of falling prices was not just for pepper, but also for other spices as he shows. In every case, the prices dropped and showed a declining trend.

TABLE 1 - CORRELATIONS PEPPER PRICES BEFORE & AFTER 1503 (HALIKOWSKI SMITH, 2008)

Panel A – Pre 1503					
	England	Netherlands	Flanders	Austria	Navarre
England	1.0000	0.4976	0.5583	0.2940	0.2929
Netherlands	0.4976	1.0000	0.6717	0.0885	N/A
Flanders	0.5583	0.6717	1.0000	0.3230	0.3972
Austria	0.2940	0.0885	0.3230	1.0000	N/A
Navarre	0.2929	N/A	0.3972	N/A	1.0000

Panel B. Post-1503											
	England	Netherlands	Flanders	Austria	Vienna	Munich	Castile	Andalusia	New Castile	Valencia	Florence
England	1.0000	0.5876	0.6519	0.5464	0.4421	0.4014	0.3533	0.6987	0.1429	0.4017	0.3939
Netherlands	0.5876	1.0000	0.6744	0.6265	0.5958	0.5489	0.5459	0.3670	0.2175	0.7871	0.3704
Flanders	0.6519	0.6744	1.0000	0.5062	0.5326	0.3911	0.4440	0.1681	0.0712	0.5875	0.3904
Austria	0.5464	0.6265	0.5062	1.0000	0.6395	0.4700	0.3716	-0.663	-0.375	0.4270	0.3493
Vienna	0.4421	0.5958	0.5326	0.6395	1.0000	0.7808	0.3239	-0.0304	0.4657	0.6560	0.4494
Munich	0.4014	0.5489	0.3911	0.4700	0.7808	1.0000	0.4000	0.0181	0.3095	0.6160	0.5104
Castile	0.3533	0.5459	0.4440	0.3716	0.3239	0.4000	1.0000	0.3406	0.6058	0.5973	0.5057
Andalusia	0.6987	0.3670	0.1681	-0.6630	-0.030	0.0181	0.3406	1.0000	0.4187	0.3858	0.2552
New Castile	0.1429	0.2175	0.0712	-0.3758	0.4657	0.3095	0.6058	0.4187	1.0000	0.5875	0.2496
Valencia	0.4017	0.7871	0.5875	0.4270	0.6560	0.6160	0.5973	0.3858	0.5875	1.0000	0.5501
Florence	0.3939	0.3704	0.3904	0.3493	0.4494	0.5104	0.5057	0.2552	0.2496	0.5501	1.0000

<sup>113</sup> de Zwart, (2016), p64

<sup>114</sup> Halikowski Smith, (2008)

The correlation between real pepper prices before and after 1503 shows that the European marketplace became more integrated as most correlations display an increase post-1503, as seen in Table 1. The English correlations are particularly high, showing that improvements in transportation, price signalling, increased availability of spices, improved warehousing and smoothing of supply all helped to integrate the marketplace more. Price signals from one pepper market would flow through to the other markets more easily.

TABLE 2 - CORRELATIONS SPICE PRICES BEFORE & AFTER 1503 (HALIKOWSKI SMITH 2008)

Panel A - Cloves				
Pre - 1503	England	Flanders	Austria	Navarre
England	1.0000	0.4105	-0.0799	0.4848
Flanders	0.4105	1.0000	0.0698	0.5925
Austria	-0.0799	0.0698	1.0000	-0.7663
Navarre	0.4848	0.5925	-0.7663	1.0000

Post- 1503	England	Flanders	Austria	Munich	Castile	Andalusia
England	1.0000	0.7321	0.6915	0.5361	0.4831	-0.5517
Flanders	0.7321	1.0000	0.7502	0.4385	0.6354	-0.1609
Austria	0.6915	0.7502	1.0000	0.6361	0.5461	-0.5785
Munich	0.5361	0.4385	0.6361	1.0000	0.3650	-0.2592
Castile	0.4831	0.6354	0.5461	0.3650	1.0000	0.0727
Andalusia	-0.5517	-0.1609	-0.5785	-0.2592	0.0727	1.0000

Panel B: Cinnamon				
Pre- 1503	England	Flanders	Austria	Navarre
England	1.0000	0.3141	-0.1145	0.0880
Flanders	0.3141	1.0000	0.4711	0.3355
Austria	-0.1145	0.4711	1.0000	N/A
Navarre	0.0880	0.3355	N/A	1.0000

Post- 1503	England	Flanders	Austria	Munich	Castile	Andalusia	New Castile
England	1.0000	0.4817	0.4414	0.3609	0.1317	0.5801	0.3515
Flanders	0.4817	1.0000	0.1905	0.7251	0.4823	0.7779	0.7733
Austria	0.4414	0.1905	1.0000	0.1284	0.4787	-0.5313	-0.3526

Munich	0.3609	0.7251	0.1284	1.0000	0.7287	0.7782	0.8456
Castile	0.1317	0.4823	0.4787	0.7287	1.0000	0.9184	0.9453
Andalusia	0.5801	0.7779	-0.5313	0.7782	0.9184	1.0000	0.9057
New Castile	0.3515	0.7733	-0.3526	0.8456	0.9453	0.9057	1.0000

Panel C. Ginger				
Pre 1503	England	Flanders	Austria	Navarre
England	1.0000	0.2375	0.5978	0.4443
Flanders	0.2375	1.0000	0.2426	0.6089
Austria	0.5977	0.2426	1.0000	0.9825
Navarre	0.4443	0.6089	0.9825	1.0000
Post 1503	England	Flanders	Austria	Munich
England	1.0000	0.0170	0.0396	0.6871
Flanders	0.0170	1.0000	0.5326	0.7564
Austria	0.0396	0.5326	1.0000	0.2190
Munich	0.6871	0.7564	0.2190	1.0000

This change in correlation behaviour shown in Table 2 between pre- and post-1503 was exhibited for cloves and cinnamon, thereby giving credence to the hypothesis that this behaviour was generic across all spices. Ginger, on the other hand, did not show an increased correlation in the post-1503 period. This could be due to changes in climate or the fact that ginger started to be produced locally in much greater quantities but is an outlier.

One final note on the Portuguese trade, before moving on to the Dutch EIC, is the element of re-export of spices to England after they landed in Antwerp. There are some records of re-export, as Halikowski Smith reports on Tristam Gomes, a Portuguese merchant, who declared in Antwerp that he had sent 41 bales of pepper (164 quintals) onwards to England, only for them to be sequestered there, although Armando Castro says that England had a market for Portuguese spices of one thousand quintals in the sixteenth century.<sup>115</sup> While most imports from Antwerp or directly from Portugal landed in London, there was also trade from the provincial ports. Irish merchants imported smaller amounts of pepper from the continent (from Antwerp, which was a major transshipment hub)<sup>116</sup> and were exporting it to Bristol.<sup>117</sup>

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<sup>115</sup> Halikowski Smith, (2008)

<sup>116</sup> Puttevils, (2015)

<sup>117</sup> Flavin, (2010), p179

In 1516/17, sixteen merchants exported spices such as pepper, cinnamon, cloves, and nutmeg. It was not possible to find comprehensive import figures for England other than what is seen in Table 3.<sup>118</sup>

TABLE 3 - COMMODITY IMPORTS FOR ENGLAND 1559-1566 (STONE, 1949).

Commodity	1559-60	1565-6
Wyne	£68,449. 10. 0	£48,634
Lynnen clothe	61,673. 14. 0	86,250
Canvas	39,072. 13. 4	32,126
Oyle	38,020. 13. 4	39,577
Woade	33,431. 0. 0	–
Fustians	23,349. 10. 0	27,254
Iron	19,559. 10. 0	6,913
Sugar	18,237. 0. 0	18,000
Warsteds	17,314. 0. 0	18,374
Hoppes	16,925. 0. 0	19,100
Flaxe	16,852. 10. 0	13,217
Threde	13,671. 13. 4	15,745
Pepper	11,852. 0. 0	27,000
Mader	11,135. 0. 0	12,133

In the middle of the sixteenth century, based upon total imports, pepper makes an entry into the fourteen key imports. If sugar is excluded, then it is the most important import. A more detailed perusal of the imports as noted in the Lansdowne manuscript is of interest in Table 4.<sup>119</sup> England was also importing mustard seed and saffron in 1564-65.

<sup>118</sup> Stone, (1949). Wyne – wine, Lynnen Clothe – linen cloth, Oyle – Vegetable Oil, Woade – a plant used to make blue dye, Fustians – a heavy cloth of cotton/cotton-linen blend used for clothing, Warsteds – worsted which is a fine quality wool yarn or fabric, Hoppes – hops, Flaxe – flax plant fibre, Threde – thread for sewing and weaving, Mader – madder which was a plant whose roots were used to produce a red dye.

<sup>119</sup> Michaelmas, (1564). Bayes – baize which was a coarse woollen cloth like felt, Frezes – friezes which was a coarse woollen fabric from Ireland, lystes of clothes – strips or edges of decorative cloth, shgrddes of clothes – shreds or leftover pieces of cloth, thrommes – coarse yarn or waste pieces of wool, worsteds of Norwiche – fine wool cloth from Norwich, leade – lead metal, seacoles – sea coal – coal transported by sea, tynne wrought – worked tin already shaped into tin goods, tynne unwrought – raw unshaped tin, beere – beer, butter corrupt – spoilt butter used in industrial uses or animal feed, hempe rowghte – raw hemp which are fibers for ropes and textiles, byllettes – small logs or pieces of wood for fues, hornes – animal horns, wool felles – wooly hides such as sheepskins with the fleece still on, fforreyne commodities – imported goods that were then re-exported

TABLE 4 - ENGLISH IMPORTS SIXTEENTH CENTURY (LANSDOWNE MANUSCRIPT, 1568)

Bayes	£785.5.0		
Clothes	851,417. 4.6		
Cottons	37,686. 4.4	Alabaster	£20.0.0
Frezes	2,890.17.0	Bellmetall	124.13.4
Lystes of Clothes	402.7.6	Gryndestones	171.0.0
Shreddes of Clothes	297. 7.4	Iron	682.1.6
Thrommes	36. 5.0	Leade	26,210.4.4
Woll	68,190. 1.4	Seacoles	4,310.4.6
Worstedes of		Tynne Wrought	1,479.8.6
Norwiche	2,564. 3.4	Tynne Unwrought	23,914.3.0
£964,269.15.9		£ 56,911.15.2	
Beere	6,408.13.4	Hornes	359. 3. 0
Butter corrupte	344.10.0	Leather	3,052.13.4
Corne	14,654.13.4	Mares and Colts	316. 0.0
Fysshe of all sortes	2,336.14.4	Old Shoes	246.10.0
Hempsede	441. 5.0	Skins	10,977.16.3
Mustardsede	460. 0.0	Shreds of Leather	88.11.0
Saffron	1,141. 3.4	Wax	541.17.0
		Wool felles	24652. 2.7
£ 25,786.19.4		£ 40,234.13.2	
Hempe Rowghte £	366.12.10	Fforreyne	
Byllettes	203.16.8	Commodities wares	
		browte in and	
		caryed out agayne	10,166. 8.5
Suma totalis of all the saide educts		£ 1,097,940.1.4	
The valew of the Remayne not hearin educted		93. 2.9	
Owte og booth which sommes £10,166.8.5 deducted for fforren wares the clere educt of all englysshe commodities is		£ 1,087,866. 15.8	

## 2.4. The Vereenigde Oost-Indische Compagnie (VOC)

The Dutch EIC, called Vereenigde Oost-Indische Compagnie (VOC) in Dutch, was established in 1602 when the Dutch government granted it a monopoly on the Dutch spice trade. It began operating in the Malukan spice trade, setting up a base in Jakarta and expanding rapidly in Southeast Asia, India, Sri Lanka, Japan, and Taiwan, paying an eighteen percent annual dividend for two hundred years. The firm competed with the British EIC, although distantly, as the VOC had only one-fifth of the tonnage carried by the EIC and half the number of ships between 1602 and 1796. The VOC won out substantially because its aim was for profit maximisation rather than sales maximisation, which was the EIC's focus.<sup>120</sup> The primary data relating to VOC imports are available from the following sources:

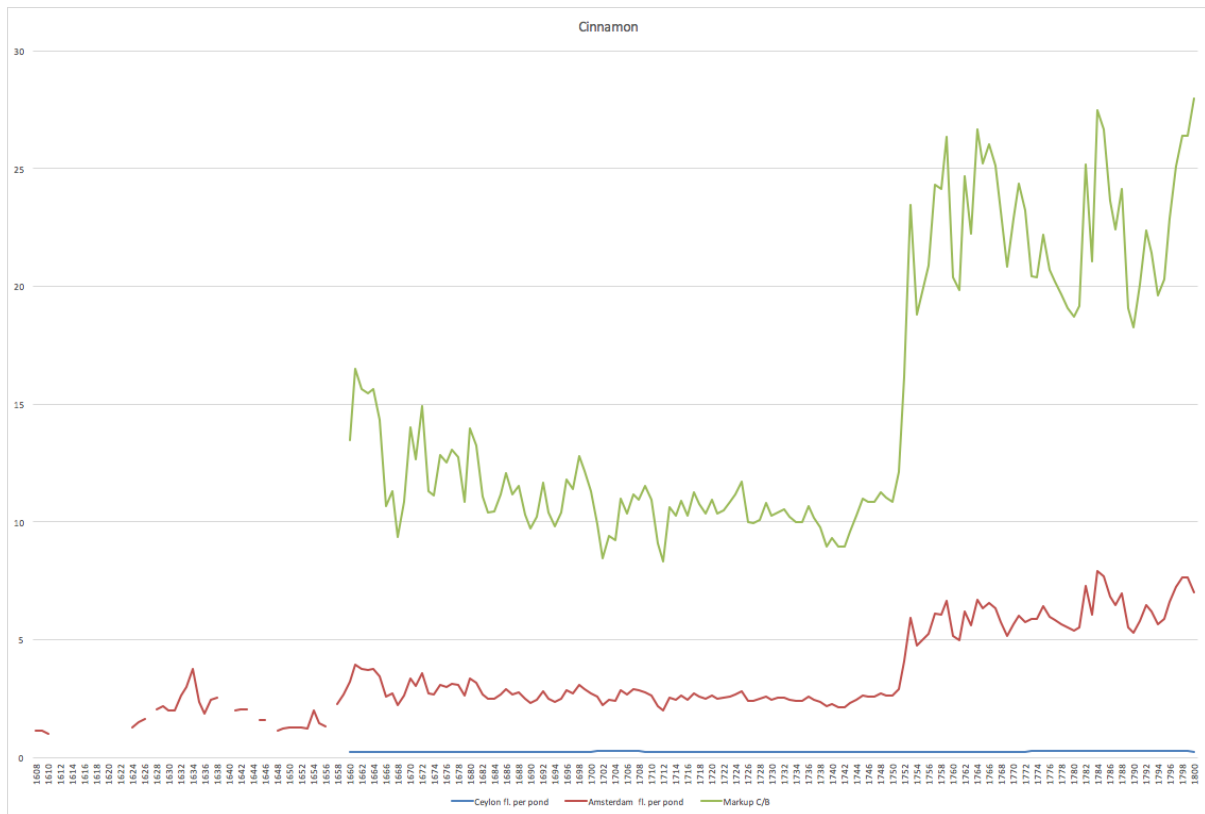
- Dutch National Archives (NA) The Hague; Archives of the Dutch East India Company (VOC) archive no. 1.04.02, inv. nos: 4584-4597: "*Samenvattende Staten*".
- Koudijs, Sundsbach, Van Zanden and De Zwart, "*VOC Auction Sales Amsterdam*".
- Posthumus, N.W., *Nederlandsche Prijsgeschiedenis*. Vol. 1. Gouderenprijzen op de beurs van Amsterdam (Leiden: Brill 1943).

<sup>120</sup> Shinkl et al, (2021)

- Glamann, K., *Dutch-Asiatic Trade, 1620-1740* (The Hague 1981);<sup>121</sup>

The purchase price, auction price in Amsterdam, and the markup for the major spices are explored in the first instance.

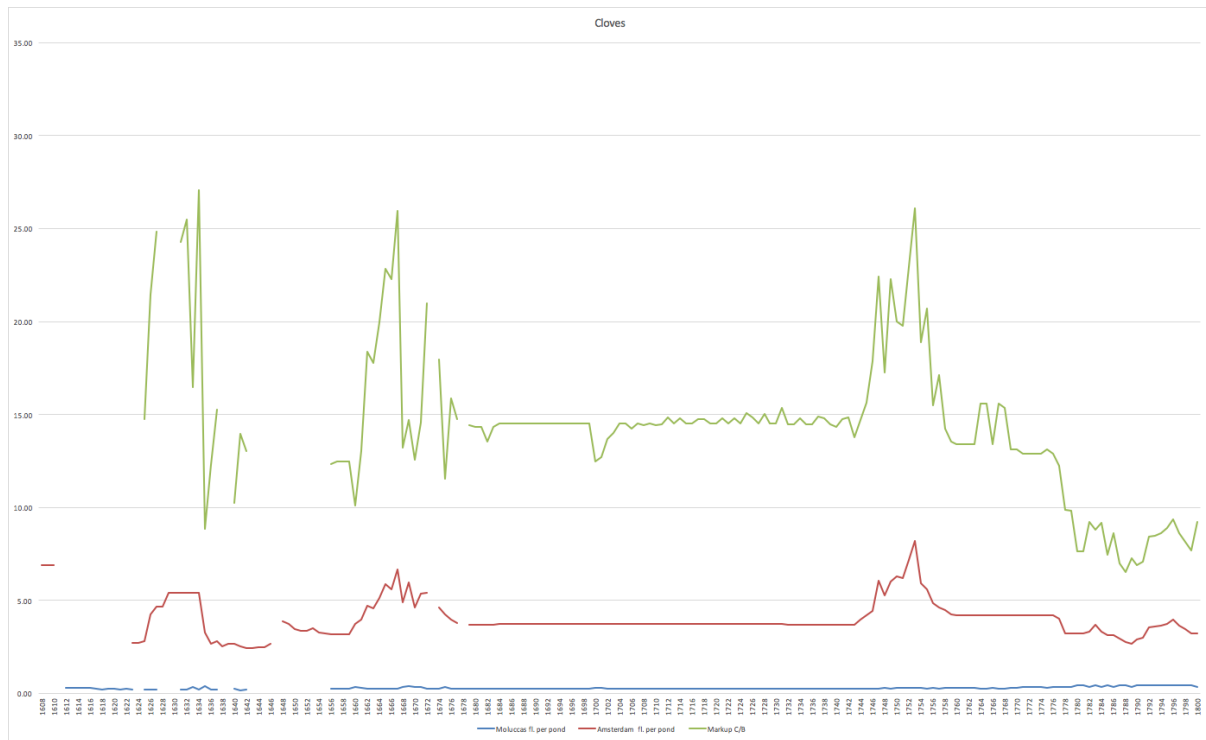
FIGURE 6 - CINNAMON PRICES (CONSOLIDATED VOC DATA BY AUTHOR)



All the graphs show how the purchase price is incredibly low and constant over the entire period. This is due to the total control they had over the production of cinnamon. Additionally, the variability of auction prices (in red) is patchy in the beginning with breaks as it starts. In Figure 6, the auction prices settle down to a standardised level until 1751, but the markup clearly shows signs of a decreasing trend. In 1752, there is a significant uptick in both the auction prices as well as the markup, whilst the purchase prices remain constant. This leads one to surmise that there was a significant demand increase or supply decrease, or both, in Amsterdam that caused the spike in the price. Unfortunately, there is nothing in the historical record to indicate why the prices spiked so much during that year.

<sup>121</sup> de Zwart, (2016).

FIGURE 7 - CLOVE PRICES IN AMSTERDAM (CONSOLIDATED VOC DATA BY AUTHOR)



The price performance of cloves in Figure 7 shows the familiar high volatility in the beginning, with some spikes from 1650 to 1678, when it smooths out until a similar jump around 1752, where the spike reaches a peak and then flattens out, only to gradually reduce, following the decreasing trend. The purchase prices remain constant, although there is a very slight gradual increase towards the end of the period. A corroboration of this result can be seen in Bulbeck.<sup>122</sup> The chart covers a longer period, although the decadal time interval smoothed out the annual price variations, as seen in Figure 7. It shows a very large markup observed between the clove prices in Southeast Asia and in Amsterdam.

<sup>122</sup> Bulbeck et al. (1998)



FIGURE 8 - MACE PRICES (CONSOLIDATED VOC DATA BY AUTHOR)

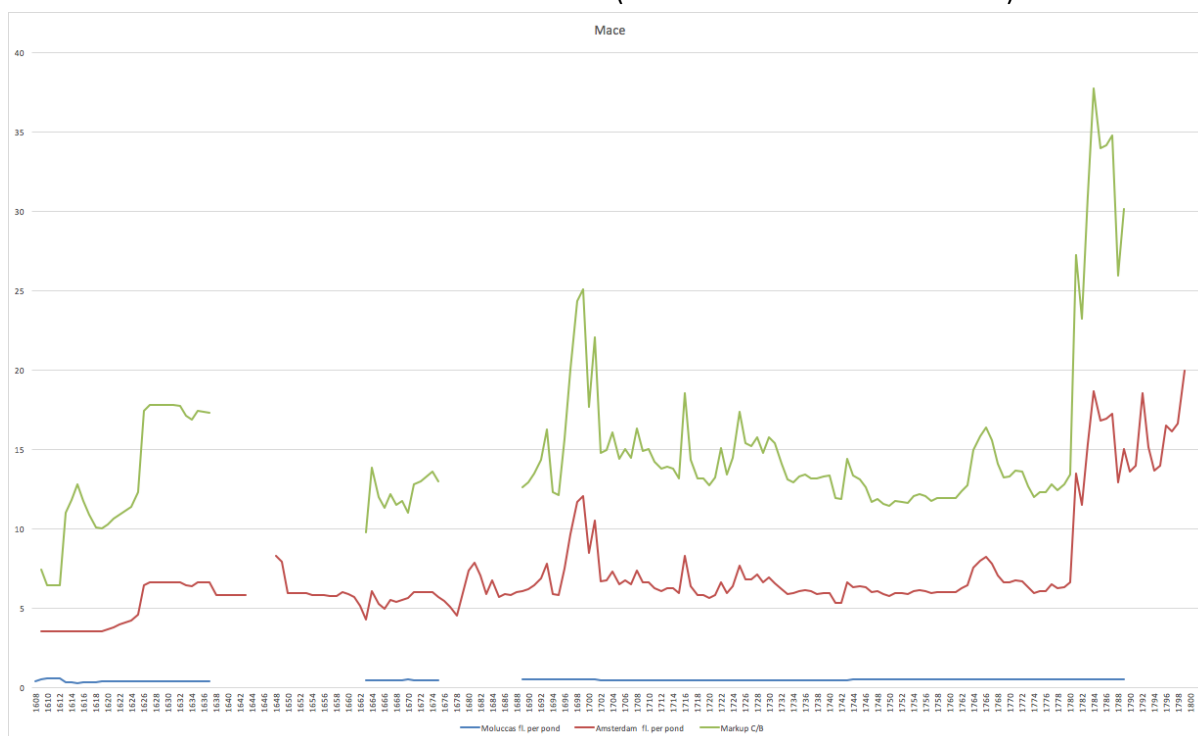
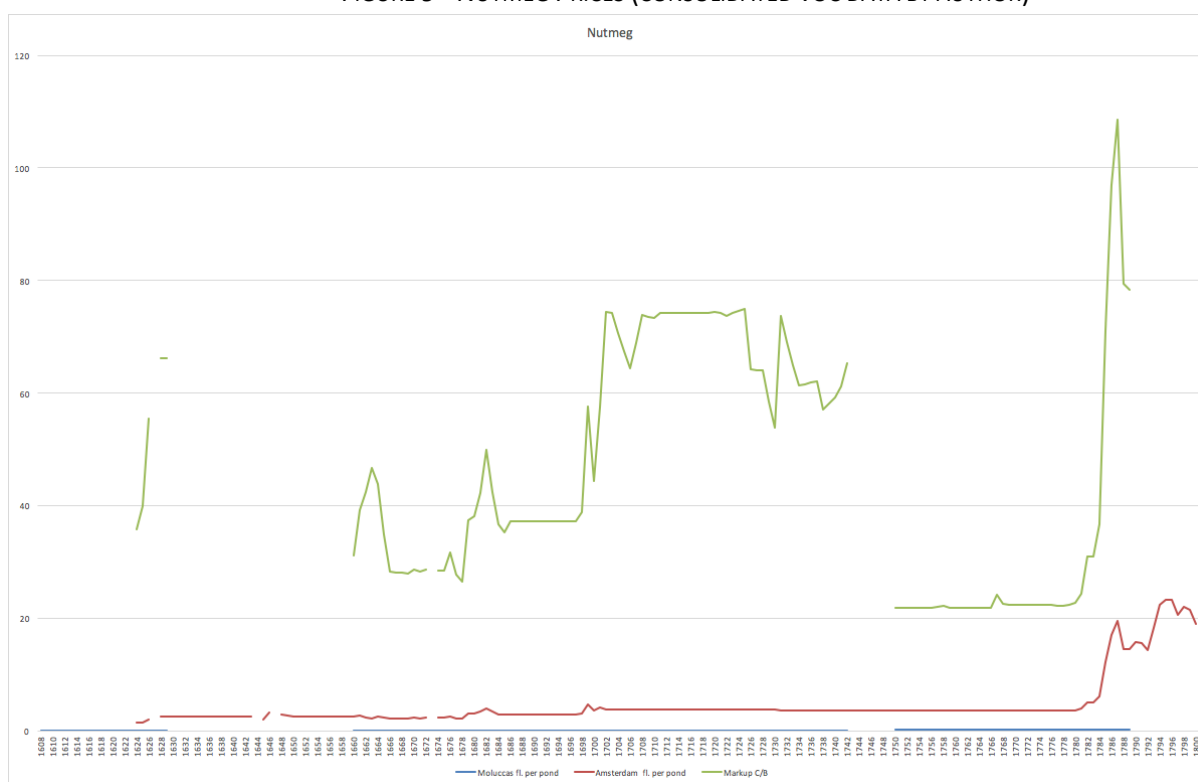


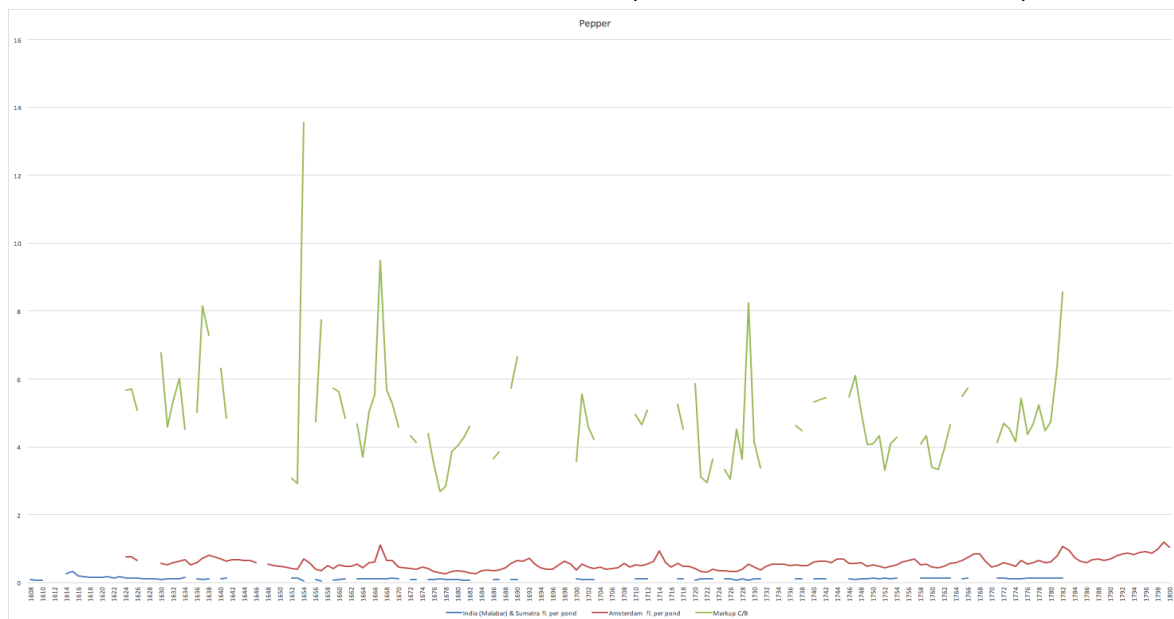
FIGURE 9 - NUTMEG PRICES (CONSOLIDATED VOC DATA BY AUTHOR)



Given that mace is the dried flesh covering the nutmeg, one could expect similar behaviour in prices given the same production background in Figures 8-9. The price history of these two spices, though, is not well established, with several gaps. Mace shows a higher degree of volatility in the markup and auction prices, while the history of nutmeg is more stable in patches. Towards the end, 1782-83, some extraordinary auction price movements happen, and the mark-up noticeably

increases. As we have seen with the other spices, the purchase price history is flat over the one hundred and fifty years.

FIGURE 10 - PEPPER PRICES (CONSOLIDATED VOC DATA BY AUTHOR)



The pepper price history series in Figure 10 is more broken than other spices, showing greater stability in relation to the auction prices. The markups are, unlike other spices, more volatile throughout history. This could be because this spice was also transported by other suppliers, including the Venetians, Portuguese and latterly the English. The markup on pepper is further supported by the data given by Bulbeck.<sup>123</sup> The sale price in Southeast Asia, where pepper had also started to be grown, versus the European prices can be seen to be significantly higher in order of magnitude, although the markup reduces towards the end of the period.

<sup>123</sup> *ibid*, p45

TABLE 5 - SE ASIAN PEPPER EXPORTS 1500-1789 (TONS) (CONSOL VOC DATA BY AUTHOR)

Year	Exports to Europe and Middle East	Exports to China	Other regions (India, Japan, America)	Total Quantity	Value in southeast Asian Prices \$,000
1500-09	50	500	400	950	47
1510-19	100	500	400	1000	50
1520-29	200	500	400	1100	55
1530-39	300	500	500	1300	78
1540-49	600	500	600	1700	102
1550-59	700	500	700	1900	114
1560-69	1300	700	700	2700	189
1570-79	1300	900	800	3000	240
1580-89	1400	900	900	3200	288
1590-99	1400	1000	1000	3400	340
1600-09	2000	1000	1000	4000	600
1610-19	1500	1000	1000	3500	319
1620-29	1500	1200	1100	3800	551
1630-39	1400	1200	1200	3800	462
1640-49	2100	400	1300	3800	602
1650-59	2200	400	1400	4000	417
1660-69	2900	500	1500	4900	357
1670-79	4500	500	1500	6500	417
1680-89	2600	600	1500	4700	392
1690-99	2600	1300	1400	5300	442
1700-09	1800	1500	1500	4800	400
1710-19	1900	1200	1500	4600	383
1720-29	3600	900	1500	6000	500
1730-39	3000	1100	1600	5700	475
1740-49	3600	800	1600	6000	500
1750-59	2300	1000	1600	4900	408
1760-69	2700	1200	1700	5600	467
1770-79	2400	1900	1800	6100	508
1780-89	2100	2100	1900	6100	508

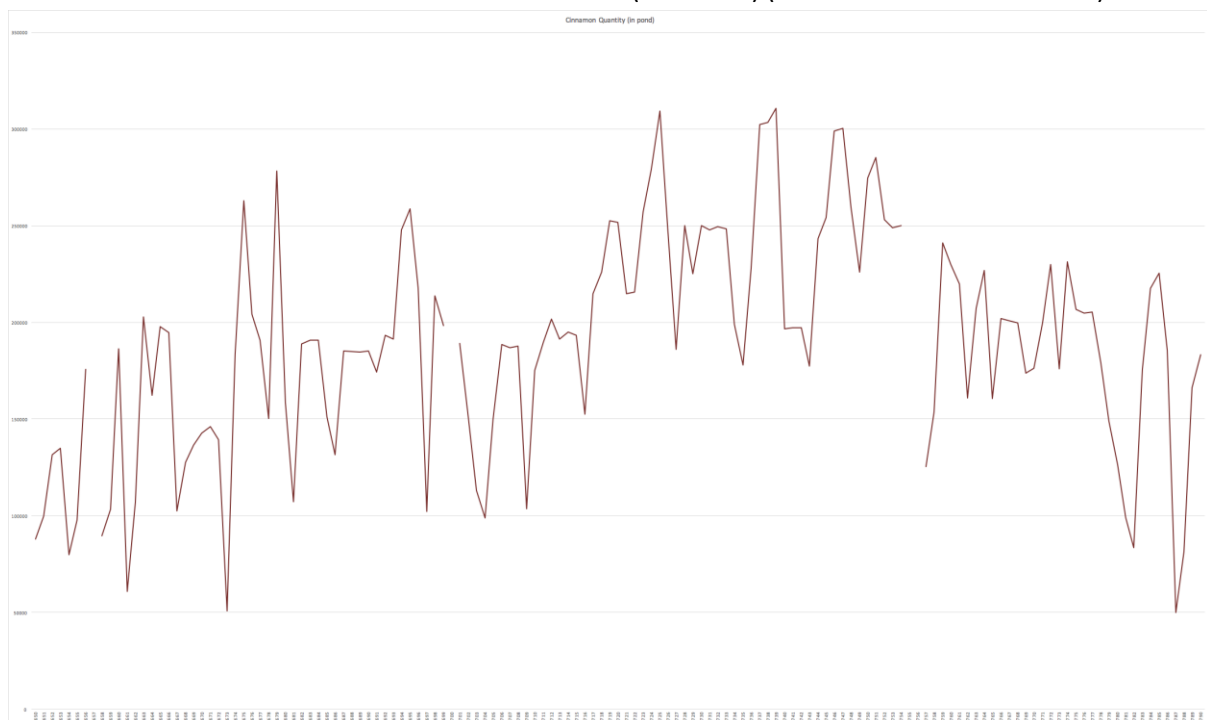
If we focus purely on Southeast Asian pepper production, an interesting view of pepper's destination emerges, as shown in Table 5 above. In the early 1500s, most of the Southeast Asian pepper was sold to China, India, Japan, and America. As the decades roll by, we see exports to China rise, but by a very low trend, while the growth of pepper exports to Europe increases dramatically, followed by the other regions. It could be assumed that this was more because of the high markups available in Europe compared to other regions.

TABLE 6 - MARKUP STATISTICS (CONSOL VOC DATA BY AUTHOR)

	<b>Cinnamon</b>	<b>Cloves</b>	<b>Mace</b>	<b>Nutmeg</b>	<b>Pepper</b>
Average	15.07	14.54	14.75	45.83	5.03
Max	27.98	30.24	37.69	108.54	13.55
Min	8.32	6.51	6.4	21.9	2.67
SD	5.82	4.43	5.14	21.22	1.63

The summary statistics of the spices in Table 6 indicate that the volatility of the markup was most pronounced in nutmeg, followed by cinnamon and mace. Certain periods show extraordinary volatility. In the next dataset, we explore the quantity dimension of the Dutch spice imports. The reason for reviewing the supply quantum of spices is to provide some indication of the physical supply of the commodity to shed light on the production side, as well as the ability of the VOC to forward plan its buying behaviour.

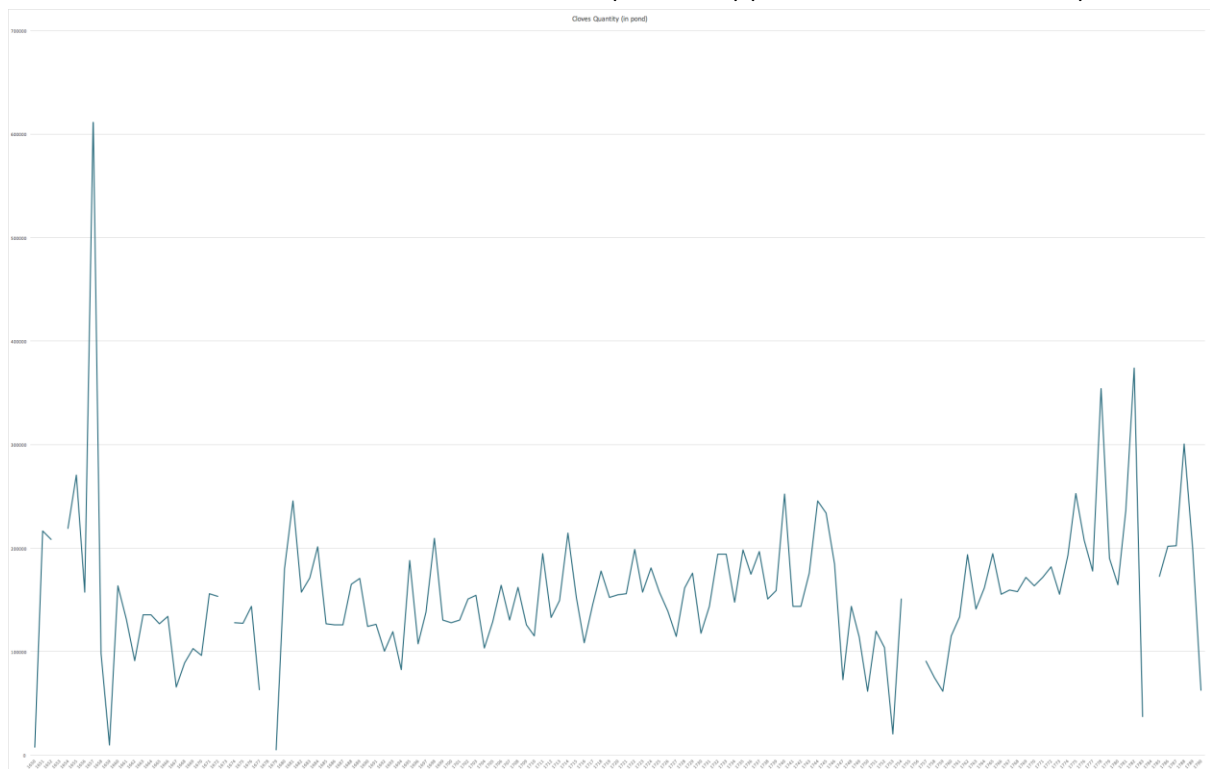
FIGURE 11 - CINNAMON QUANTITY (IN POUNDS) (CONSOL VOC DATA BY AUTHOR)



The sheer volatility of cinnamon imports could seem quite surprising, as seen in Figure 11. Usually, the VOC and other firms (such as the British EIC) learnt how to improve their purchasing policy over time, which meant that they would smooth out their purchases (imports) given that demand would not fluctuate that much, but in the case of cinnamon it does not appear so, as the

volatility extends across the entire period. This then leads one to compare purchase prices with the auction prices, which show much less variability. This means that the VOC was able to store cinnamon and release it in measured quantities onto the market to smooth the auction prices. Assuming the demand to be stable, that is the only conclusion one can draw. The other reason cinnamon imports were so variable could be that each year the purchase of cinnamon across their overseas holdings was competing with other buyers. Sometimes the crop yield could be bad, or the competitors could buy a greater or lesser quantity. Unfortunately, there is no warehousing data available to explain its storage and release policy. The last point on cinnamon is that the Dutch did not fully control all sources of cinnamon production, hence forced by the market to purchase as much as was available, given prior contracts and other competitors.

FIGURE 12 - CLOVES QUANTITY (IN POUNDS) (CONSOL VOC DATA BY AUTHOR)



The quantity of cloves in Figure 12 shows a better control over its purchasing behaviour after the initial exceedingly high variability. The quantities purchased and delivered to Amsterdam are much less variable, showing that the Dutch were better able to control the spice at its origin, with less need to store, and had better supply chain management. The variability increases towards the end of the period, though, which could be because of higher competition.

FIGURE 13 - MACE QUANTITY (IN POUNDS) (CONSOL VOC DATA BY AUTHOR)

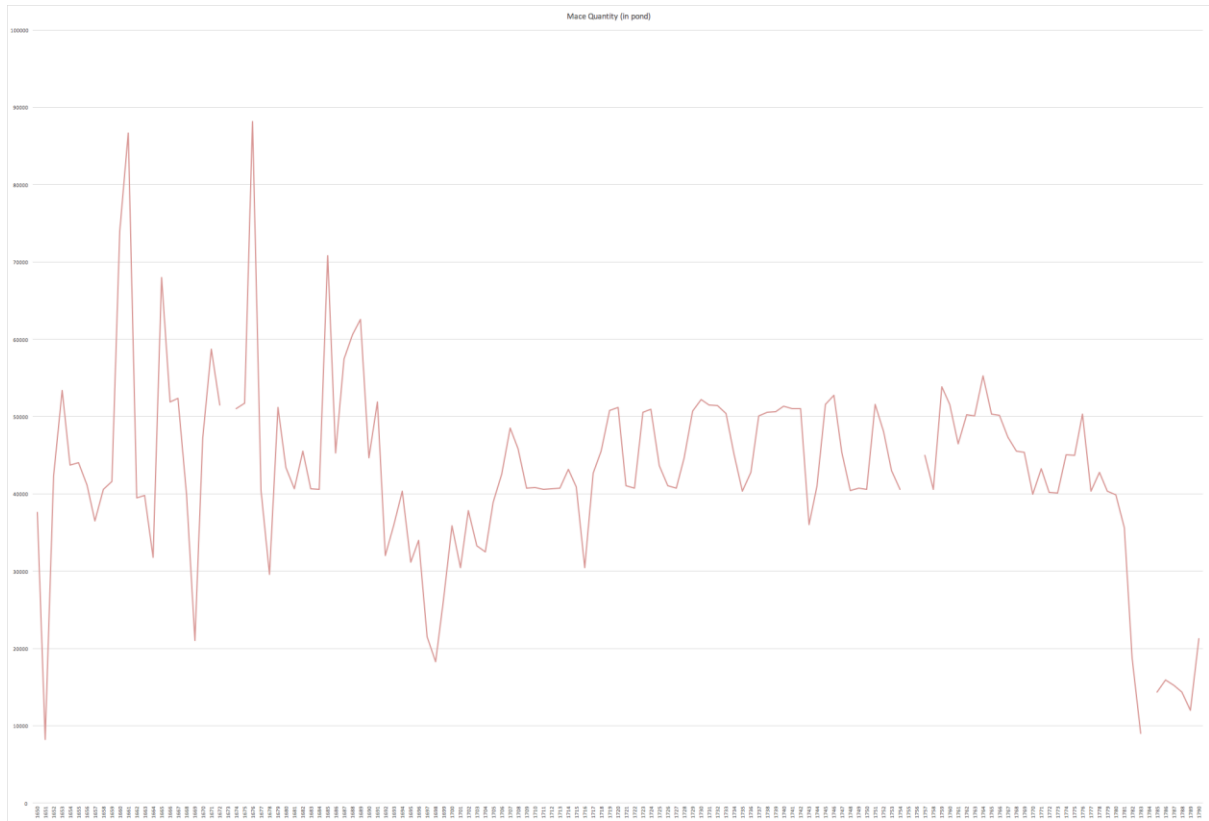
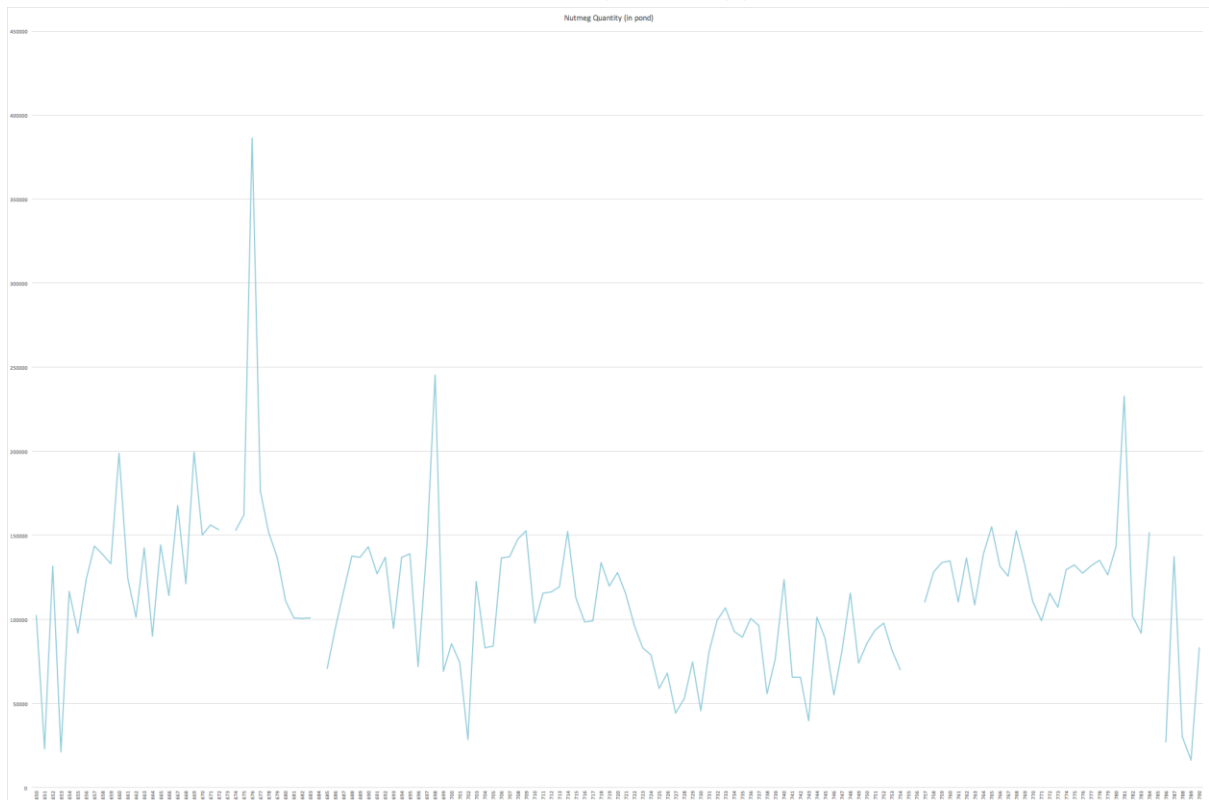


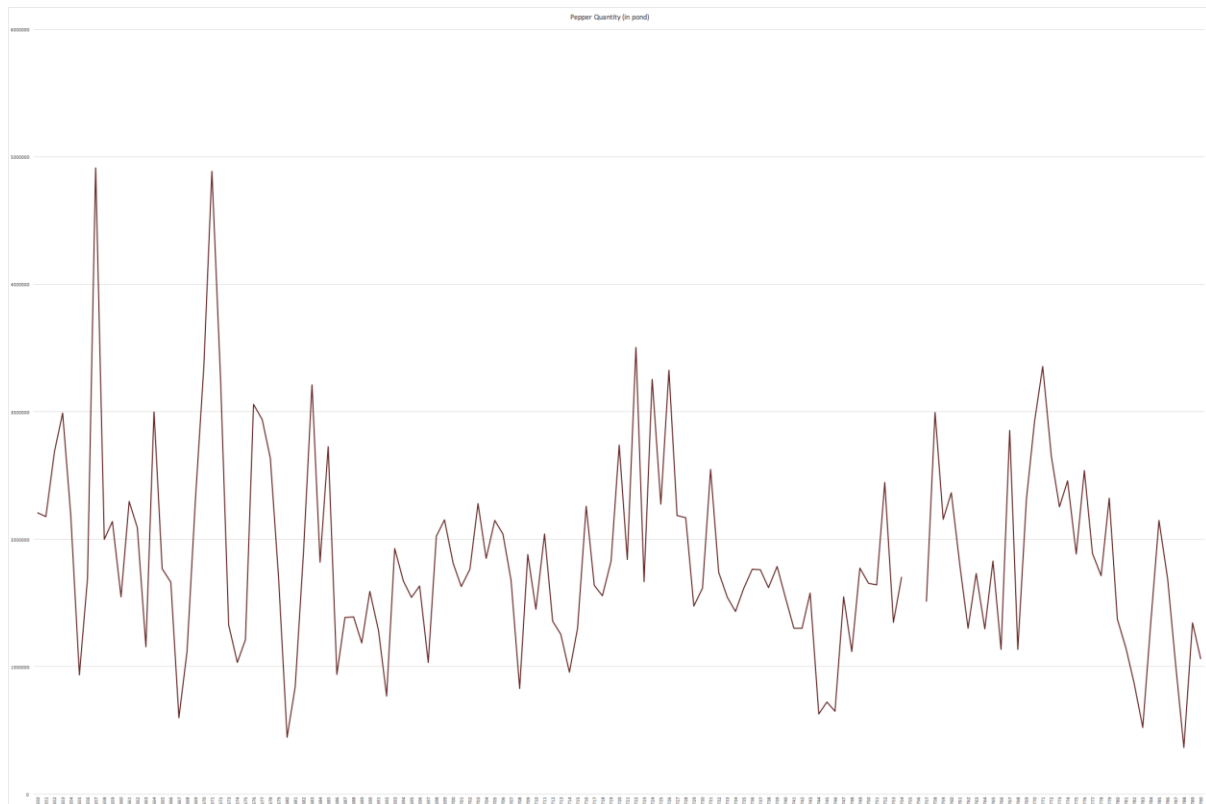
FIGURE 14 - MACE QUANTITY (IN POUNDS) (CONSOL VOC DATA BY AUTHOR)



Looking at mace and nutmeg together, from Figures `3-`4, mainly because both are entwined and because they were grown in a small, easily controlled location, both spices show

similar behaviour for most of the period, with high variability while the Dutch did not control the production, and then more stable purchasing behaviour is evident as they took control over the Moluccas. Curiously, the behaviour diverges right at the end, where mace purchases drop significantly, while nutmeg spikes and then drops as well. It could be because of British competition and the ongoing decay of the VOC.

FIGURE 15 - PEPPER QUANTITY (IN POUNDS) (CONSOL VOC DATA BY AUTHOR)



Pepper was one of the widely grown crops and saw heavy purchase competition by various European and Asian parties. This leads one to expect that the variability seen in Figure 15 was more likely due to the potential availability of pepper during that growing season. Interestingly, the behaviour of the auction prices of pepper is also highly variable. This could be because pepper, unlike other spices, starts losing potency after approximately six months and therefore long-term storage is an issue. The quantity produced, especially in Southeast Asia, will be explored further later, after the correlation between these factors is analysed, as shown in Table 7.

TABLE 7 - CORRELATION BETWEEN SPICE PRICE AND QUANTITY

Column1	CinnamonPrice	CinnamonQtn	CinnamonVal	ClovesPrice	ClovesQtn	ClovesValue	MacePrice	MaceQtn	MaceValue	NutmegPrice	NutmegQtn	NutmegValue	PepperPrice	PepperQtn	PepperValue	PepperwhitePrice	PepperwhiteQtn	PepperwhiteValue	Total value	Amsterdam sales
CinnamonPrice	1.00	-0.03	0.18	0.13	0.56	-0.25	0.07	0.41	0.12	0.51	0.38	-0.07	0.19	0.13	-0.14	-0.10	-0.25	0.21		0.11
CinnamonQtn		1.00	0.45	0.23	-0.09	0.05	-0.20	0.25	0.17	-0.02	-0.14	-0.09	-0.17	0.03	-0.02	0.05	-0.04	0.01		-0.28
CinnamonVal			1.00	0.20	0.04	0.13	0.28	-0.04	0.17	0.29	0.05	0.35	0.24	0.03	0.27	0.13	-0.18	-0.13		-0.43
ClovesPrice				1.00	-0.38	-0.06	-0.37	0.26	0.01	-0.31	0.08	-0.13	0.04	0.08	0.14	0.18	-0.22	-0.18		0.12
ClovesQtn					1.00	0.92	0.13	-0.11	0.00	0.16	0.01	0.11	0.12	0.10	0.14	-0.05	0.09	0.12		-0.14
ClovesValue						1.00	-0.05	0.04	0.06	-0.01	0.07	0.08	0.12	0.17	0.24	-0.01	0.00	0.04		-0.07
MacePrice							1.00	0.74	-0.45	0.30	0.02	-0.22	0.15	0.06	-0.01	-0.21	-0.19	0.23		0.05
MaceQtn								1.00	0.74	-0.45	0.30	0.02	-0.22	0.15	0.06	-0.01	-0.21	-0.19		0.23
MaceValue									1.00	-0.10	0.26	0.28	-0.03	0.01	0.05	0.06	-0.20	-0.17		0.10
NutmegPrice										1.00	-0.35	0.17	0.27	-0.26	-0.14	0.21	-0.03	0.06		-0.28
NutmegQtn											1.00	0.74	0.10	0.10	0.14	-0.06	0.03	0.03		0.25
NutmegValue												1.00	0.34	-0.11	0.06	0.08	0.01	0.06		-0.14
PepperPrice													1.00	-0.48	0.11	0.40	0.04	0.26		-0.23
PepperQtn														1.00	0.73	-0.12	-0.16	-0.24		0.00
PepperValue															1.00	0.10	-0.10	-0.07		-0.20
PepperwhitePrice																1.00	-0.50	-0.12		0.02
PepperwhiteQtn																	1.00	0.85		-0.17
PepperwhiteValue																		1.00		0.00

Correlation does not imply causation; it simply shows the degree of co-movement between two data series. A negative correlation shows an inverse relationship, while a positive correlation shows a direct relationship, ranging from -1 to +1, with a zero showing no relationship at all. This is an interesting statistic to explore because of the degrees of interdependency. In this case, spices are inter-dependent because of their primary use in cooking, where a variety of spices can be used in a single dish. The dataset, which has price, quantity and value, allows exploration of the relationship in more dimensions than just auction price, quantity, or spice value.

**Price Correlations:** Cinnamon exhibits positive correlations with all the spices, with a high of 0.51 against nutmeg, a price correlation behaviour shared with pepper, which also exhibits positive correlations across all the spices, albeit the highest correlation being against nutmeg with 0.27. White pepper has the one negative correlation against mace for which there is no logical explanation. Cloves show an interesting negative correlation behaviour against nutmeg and mace, whilst the correlations with other spices were in the low positives. Would the negative correlation come from the fact that while shipping nutmeg and mace from the Spice Islands, there was an impact on the shipping capacity of the Dutch ships that normally picked up spices from Ceylon and India? Alternatively, is there a direct substitution effect? If the shippers and purchasers bought nutmeg and mace (grown and sold together), would their propensity to add cloves to the shipment be lower? This is simply a hypothesis and proving it is beyond the scope of this research.

**Quantity Correlations:** broadly, the quantity of spices landed in Amsterdam shows low correlations. One confirmation that mace and nutmeg are usually shipped together is shown by the high positive correlations of 0.30. Another confirmation of the above negative relationship between cloves and nutmeg/mace is shown by the negative correlation with mace and 0.01 (barely positive and indicating no correlation) with nutmeg. So other than this clove, nutmeg and mace negative correlation, there is no other statistically significant relationship. One reason could be that different ships transported different spices and the origins of the spices are significant-for instance, some spices were shipped from certain ports/countries and others from other ports/countries (such as pepper-this would mean different times and quantities which are unrelated due to different ordering and storage options in different ports and countries), hence there is no connection between the quantities shipped. Value would be a second-order correlation given that it is already a product of price and quantity versus one of these factors. Hence the value correlations against quantity would be very high, as expected, as would the value correlations for various spices against each other, which show a small positive correlation. This is because once spice value is addressed,



the elements of liquidity in the market, bullion availability, etc. become factors. This area is outside the scope of this dissertation, but if these behaviours are exhibited in the English market, then it would be worthwhile exploring. The final dimension to analyse before exploring the English economic history of spices is Southeast Asian exports.

TABLE 8 - WORLD CLOVE SALES 1620-1790 (TONS) (BULBECK 1998)

Year	Holland	English	Surat	All India	All Asia	Total
1620	225-242	78-83	7	11.5		
1621	242		7	12		
1622	156-173	60	20	36.5		
1623	+_ 346	100-120	15	35		
1624			12		{120	{450
1627				12		
1637				25		
1638	200	60-120		17	{100	{400
1639				20		
1641			30			
1642	+_191		21.5			
1643			14			
1644	+_319				{103	{308
1645	+_150-200		49			
1646			27			
1647			12.5			
1648	+_138		38			
1649			30			
1650			31			
1651			45.5			
1652			31			
1653	+_200		58			
1654	178		59		{100	{300
1655			15			
1656	296		47			
1657	198		26			
1658		9.5				
1659	+_125	40				

Year	Holland	English	Surat	All India	All Asia	Total
1660	+_150	26.5				
1661	+_125	27.5				
1662	+_135	14				
1663	+_150	28				
1664	+_135		7		{54	{160
1665	+_30		28			
1666	+_100		11.5			
1667	74		37			
1668	74		25			
1669	99		20			
1670	77		30			
1671	136		34			
1672	0		35			
1673	124		32			
1674	124		61		{45	{136
1675	86		37			
1676	74		23			
1677	74		47			
1678	+_84		26			
1679	127		48			
1680	101		35			
1681	31		38			
1682	107		47			
1683	135		35			
1684	27		38		{45	{134
1685	93		47			
1687	130	49				
1688	+_148		28			
1689			38			
1690			96			
1691	130					
1692			6			

Year	Holland	English	Surat	All India	All Asia	Total
1693			40			
1694	115		57			
1695	130	46			{59	{176
1696	+_49		50			
1697	+_99		47.5			
1698			50			
1699	130					
1700						
1701			+_20			
1702	+_150					
1703	+_180				60-70	208-218
1714	215				60-70	275-285
1720-29	150-200				60-70	210-270
1730-39	150-200				60-70	210-270
1740-49	+_110				60-70	170-180
1755-60	85				60-70	145-155
1760-69	203				66	280
1775-80	140				60-70	200-210
1780-87	+_68				60-70	128-138

Table 8 shows a consolidation of various data sources for clove sales from the Spice Islands to different destinations. As can be seen, the economic history of spices for England cannot be undertaken in isolation because both the VOC and EIC were competing for the same spices from the same source. In this case, most clove purchases for the period 1620-1787 were undertaken by the Dutch, the English purchases being a fraction of the Dutch volume. The last column shows the Asian trade, which is the remainder of the Maluku production not destined for Dutch or English markets, hence for domestic Indonesian, Chinese, or Southeast Asian consumption. It should also be considered that the English trade, which was being landed in Surat, was not meant for full export to England; it was also for domestic Indian consumption.

## 2.5. The Pre-East India Company English Spice Trade

The spice trade between Venice and England flourished for many centuries, therefore, a specific Venetian Counsel was appointed in England.<sup>124</sup> The trade was conducted by a small fleet of ships called "*Flanders Galleys*." Whilst other merchandise such as silk, cotton, and glass were

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<sup>124</sup> Epstein, (1908), p2-8

imported, spices were the main product and most remunerative. The Venetians distinguished between spices proper, or “gross spice,” and the drugs, or “small spice.” Gross spice included ginger, cinnamon, pepper, cloves, nutmeg, sandalwood, and camphor, while small spice included rhubarb, aloes, dates, sugar, currants, prunes, and wine. This trade started to wither under the trading policy of Henry VII, who wanted the English ships to have a share in the wine trade. A damaging tariff war broke out, culminating in the 1492 Act of Parliament, which imposed import duties.<sup>125</sup> Moreover, the League of Cambrai ruined the Venetian Republic, which meant that from 1509 to 1518, no Venetian fleet visited England, and by 1532, no more galleys sailed to England. The last independent galley that came to England was in 1587 (and ended up shipwrecked off the Isle of Wight).<sup>126</sup> This reduction in Venetian trade had a beneficial impact on English trading with several English missions to the Levant. Ottoman Sultan Murad III issued a Charter of Privileges to English Traders in June 1580.<sup>127</sup> Despite opposition from the French and Venetian Ambassadors, the treaty was confirmed, and an English merchant ship arrived in Constantinople on June 9, 1584. Queen Elizabeth I issued *letters patent* to London merchants on September 11, 1581, and according to a report, specifically included spices besides other commodities.<sup>128</sup> The company, whilst reviewing its five-year operations in 1590, stated that it employed nineteen ships, made twenty-seven voyages, and paid a total of £11,359 6s in customs tax.

After extensive interminable discussions and trade conflicts between the London merchants trading with Turkey and those trading with the Venice Company, a decision was taken to fuse the two companies together with a new charter; this was issued on January 7, 1592, incorporating 53 merchants as *The Governor and Company of Merchants of the Levant* (ibid, p36). This company had a significant trade monopoly over Venice and the Levant. Trade prospered also because there was a market for British goods and therefore imports from Turkey and further afield could be paid off by the bullion and monies raised by selling British goods in Turkey; a different situation when compared with the EIC, which will be discussed in the next section. Without firm data, it is impossible to note if the Levant Company had a monopoly over the import of spices into England. There was a strong overland trade initiated by the Venetians, which arrived in Antwerp and from there was shipped to England via the coastal trade, even though the Venetians were not shipping spices directly into England. Curiously, the charter also mentions that this company had a monopoly over the East Indies (only lately discovered) for a period of twelve years. Whilst initially the company prospered, its success attracted increased taxation, followed by increased competition from the newly founded EIC. On December 14, 1605, a new charter without a monopoly was issued by King James,<sup>129</sup> The company-imposed tariffs (based on lists dated 1608 that were again adopted in 1631) on goods imported from or into Turkey, however, if traded from/into Venice, they were assessed at half the rate. The examples are only for spice-related items:<sup>130</sup>

- 15. cloves, per cwt., 4 shillings.
- 18. cardamoms, per bale, 5 shillings.
- 30. ginger, per cwt., 1 shilling.

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<sup>125</sup> Lane, (1933 & 1940)

<sup>126</sup> Musgrave, (1981)

<sup>127</sup> Andrews, (1988), p91

<sup>128</sup> Epstein, (1908), p19

<sup>129</sup> ibid, p57

<sup>130</sup> ibid, p232

- 50. long pepper, per bale, 5 shillings.
- 53. maces, per cwt., 5 shillings.
- 57. nutmegs, per bale, 6 shillings. 8 pence.
- 61. pepper, per bag, 3 shillings.
- 69. cinnamon, per bale, 6 shillings. 8 pence.
- 84. turmeric, per bale, 2 shillings.

The Muscovy Company was the first major chartered joint-stock company in England, chartered in 1555. Unfortunately, the early records of the company were destroyed in the Great Fire of London in 1666.<sup>131</sup> The story of the company begins in 1553, when a group of Londoners financed a convoy of ships to find the Northeast passage to Cathay, away from the sea routes already owned and controlled by the Portuguese. They managed to reach Moscow, where Tsar Ivan IV agreed to let English merchants trade with Moscow. The main imports were furs, tallow, wax, timber, flax, tar, and hemp, while the main export was English cloth.<sup>132</sup> With many fluctuations due to domestic and international geopolitics in both countries, the company kept trading till 1698 and then slowly disappeared from active trading.<sup>133</sup> The company was also engaged in the spice trade. The Grocers (spice merchants) held second place numerically amongst the creators of the Muscovy Company.<sup>134</sup> The overland spice route from India and China came to Persia and the Black Sea, then moved north to Moscow, allowing the British factors (local representatives) based in Moscow to purchase the spices and ship them by sea to England, as the following letter by Arthur Edwards, dated 1566, evidences: "*I have written the prices of wares in my letter to the governour both for spices and some drugs, which I do know.*"<sup>135</sup> The company attempted to improve the Indian drugs and spices supply chain from Persia, which bypassed the Portuguese-controlled sea route as well as the Venetian stranglehold over the Egyptian development of the Levantine spice trade.<sup>136</sup> Whilst British woollens and cloth were selling well in Russia, they were not that well received in Persia, causing some difficulties in paying for luxury goods such as spices and drugs. Regretfully, there is no record of the amounts or prices paid for spices via this route. Nevertheless, the number of ships to Moscow rarely crossed into double figures annually, resulting in a patchy trade at best. Another chartered company called the Eastland Company, or North Sea Company, was founded in 1579 to trade with Scandinavia and the Baltic Sea states of Norway, Sweden, Poland, Livonia, Prussia, and Pomerania, excluding the places reserved for the Muscovy Company. The company was unsuccessful, and the Dutch took over the Baltic trade. The company ceased to exist when Parliament passed the Trade Act 1672 entitled *An Act for the Incouragement of the Greeneland and Eastland Trades and for Detter Securing the Plantation Trade*. This turned the Baltic into a free trade zone.<sup>137</sup>

By this time, the EIC was well established and there was a feeling that there could be a route for disposing of excess spice imports from the EIC into the Baltics and down to Poland via the Eastland Company.

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<sup>131</sup> Ariel, (2019)

<sup>132</sup> Willan, (1953), p8-34

<sup>133</sup> Zins, (1972), p23

<sup>134</sup> *ibid*, p89

<sup>135</sup> Hakluyt, (1969), p126

<sup>136</sup> Kotilaine, (2005), p64-178

<sup>137</sup> Sellers, (1906), p230

“The revenues of both of the King and Gentlemen is here esteemed but moderate and scarce sufficient to maintain a plentiful table and to exchange with merchants for wines and spices which they yet much covet”.....The Polonians being of that nature as love to make good cheer (especially the gentlemen) and to spend disorderly in feasts and apparel, so they consume more than their revenue will bear, for they eat more spice than any other nation, and their wine, silks and most of their cloth come from foreign parts; the country must of necessity be poor of gold and silver.”<sup>138</sup>

There is not much proof that this company imported spices into England, although there were nine grocers (spice merchants) in the Eastland Company in the Elizabethan era.<sup>139</sup> Hence, there was still an ongoing land-based supply chain of spices moving overland to Turkey and from there to England, either directly or via Venice or Moscow, despite the supply coming from the Dutch in Amsterdam and the EIC.

## 2.6. The English East India Company (EIC)

Up until now, the discussion has primarily centred on the supply side of the spice trade. In this section, we continue with describing the EIC’s supply of spices but also extend it to include how the EIC paid for these spices and the supply chain management from the production sites up to the warehousing and sales in London.

The Portuguese opening of the sea route to India, the success of the VOC and the Levant Company, all prompted the establishment of the EIC. Soon after the defeat of the Spanish Armada in 1588, London merchants petitioned Queen Elizabeth I for permission to sail to the Indian Ocean. Permission was granted on April 10, 1591. Three ships sailed from Torbay to the Arabian Sea, and one of them then sailed around Cape Comorin to the Malay Peninsula, returning to England in 1594. The Queen granted a royal charter on December 31, 1600, to the Governor and Company of Merchants of London trading with the East Indies. There was stiff competition from the VOC, but despite frequent battles with the Dutch and Portuguese, it managed to expand into Southeast Asia, Africa, China, and India.

The EIC was organised in a manner that modern firms recognise as the antecedent of modern departments.<sup>140</sup> There is a staff function, with a court of directors and subcommittees overseeing the firm with geographically based functions. Data relating to the functioning of the firm, its committees, and its operations in Asia, as well as staff functions, is available and can therefore provide insights into how the EIC managed the spice trade. This complex system overlaid and underpinned the extraordinarily complex supply chain, treasury management, cash flow management, demand, and warehousing management of the enterprise. Complicating the entire exercise were the vagaries of the letters, shipping schedules, political and military issues, and the distance and time between the orders and responses. KN Chaudhuri provides a comprehensive overview of the mechanisms for ordering pepper based upon the economic model described above. The key drivers behind the spice trade for a particular period were:

1. Availability of shipping (net-as some ships were lost, others were under maintenance, some were leased and had to be returned),

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<sup>138</sup> Ferorowicz, (1980), p99

<sup>139</sup> Zins, (1972), p89

<sup>140</sup> Chaudhuri, (1978), p24, 26

2. Net cargo volume as the shipping would manage multiple products besides spices.
3. Stocks of spices warehoused in the factories,
4. Competition for spices from other European firms, domestic consumption, and exports to other markets such as China, which consumed much more than the European continent.<sup>141</sup>

The key element to the success of the European trading firms was that they had a strong mechanism for storing history in their accounting records; hence, could evaluate the entire supply chain turnaround period and therefore improve the business cycle. The second element of their success was the EIC's institutional nature. As it was not aligned with individuals but led by a committee, lending it a permanence and solidity that equivalent Eastern firms could not replicate, as individual people managed them. Finally, the record keeping and documentation provided a level of management information that ensured the spice trade was sustainable despite the very long supply chain with difficulties in procurement and transportation. The EIC communicated copiously within the various governing boards and with its ship captains and factors. The volume and maximum sale price of pepper to be purchased were communicated for the approaching outgoing sailing season—knowing that the actual spices would only return after two years or more. Hence, there was a broad-based direction, and the later sailings carried more up-to-date instructions. These instructions kept changing direction based upon domestic English conditions, sale prices, import prices, and politics. They also had a strongly directive tone to keep the costs low and have sufficient, superior-quality, warehoused stock, so that the ships were not moored for longer than necessary.

One element complicating the situation with pepper was the question of ballast. Ballast is the heavy weight loaded at the very bottom of sailing ships just above the keel to keep the ship steady. Historically, stones, broken limestone, sand, gravel, millstones, coral, and other materials were used until companies such as the EIC and VOC understood that these heavy weights, though necessary, did not need to be un-economical. Therefore, iron was used as ballast on the outward leg, whilst for the return journey, pepper was used. Pepper was shot through into the hold to secure the cargo. This meant that the pepper was ground into dust or damaged during the difficult sea journey home. However, this damaged pepper, and dust also had a much lower priced market for cheaper wholesale, commercial and industrial uses.<sup>142</sup>

The boxes, containers and bales were of diverse sizes and shapes and would have significant space between them. When stored in the hold, especially in the pitching seas off the Cape of Good Hope, the cargo shifted despite being tied down. Pepper was shot through into the hold, thereby filling the gaps between the containers. While it ensured the cargo would not move, it also removed the need to have stones in the keel for ballast purposes. The pepper was damaged due to the movement of the containers, the bitumen used to waterproof the hull, as well as water leakage, but once ground down, it was sold at a cheaper price, as evidenced by the EIC's separate and lower price for damaged pepper.<sup>143</sup> The pepper ballast was vital and as late as 1754, the Court reminded the Bombay Council that even though pepper was sold at a loss, without pepper ballast, the remaining goods could not return to England.<sup>144</sup> Returning, the lower hold was shot through with pepper and then covered with a solid layer of closely fitting planks; the spices were loaded either loose or in bales. Another orlop deck was then fitted, with another cargo (other than spices) loaded, and again

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<sup>141</sup> *ibid*, p313-28

<sup>142</sup> *ibid*, p326

<sup>143</sup> Sainsbury, (1922)

<sup>144</sup> Chaudhuri, (1978), p313

pepper was shot between the various oddly shaped cargo containers to stop their movement during the tortuous sea voyages back to Europe.

There were some economic losses. In 1754 the Company calculated that during the ten years from 1742 to 1751 it had lost £90,000 on the pepper shipped from Tellicherry. Similar computations carried out for Bencoolen revealed that the losses on Sumatran pepper amounted to £32,000 during the same period.<sup>145</sup> Despite these losses, the Court of Directors reminded the Bombay Council that it should purchase pepper at the cheapest price possible, as the shipping back to England could not be without pepper as ballast.<sup>146</sup> The damage to the spice cargo had other unforeseen costs and issues. The customs officers levied customs duties and fees as if the cargo was of good quality and therefore worth more than the company expected to gain by selling these damaged goods. There was a petition to the East India Council that a dispute over customs duty payable on a cargo of cloves should be referred to arbitration:

“.....that we haueing now brought a shippes ladinge of Cloues out of those pte & findinge the same to be very full of dust & garble by the longe carriage thereof, we have beene enforced to make or entries int he Custome Howse accordinglie, otherwyse we should haue beene comelled to pay the Custome of Cloues, onelie for dust & gable of small or noe valew at all. The wch manner of entrie, the ffarmo (seekinge their owne priuate gaine haueing noe regard to the quallitie of the same, or of or longe & chargeable voyadge & adventure) refuse to take vrdginge vs to enter them all for Cloues with of intollerable injurie....”<sup>147</sup>

### **2.6.1. The Pepper Trade as per KN Chaudhuri**

Despite the availability of an exceptionally large corpus of data, it was challenging to procure data relating to spice imports or re-exports by the EIC. The only clear information found was in K.N. Chaudhuri's book *The Trading World of Asia and the English East India Company 1660-1760*, which gives some indication of pepper imports for 1664-1760.<sup>148</sup> There is also no explanation for why this period was selected. Though the import values covered 1664-1760, the values for pepper sold in London only covered 1664-1707. Chaudhuri notes that the data was from the Accountant General Ledgers, without mentioning how the data was abstracted or consolidated. Without this information, it is impossible to replicate the pepper data collection method for other spices.

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<sup>145</sup> *ibid*, p326

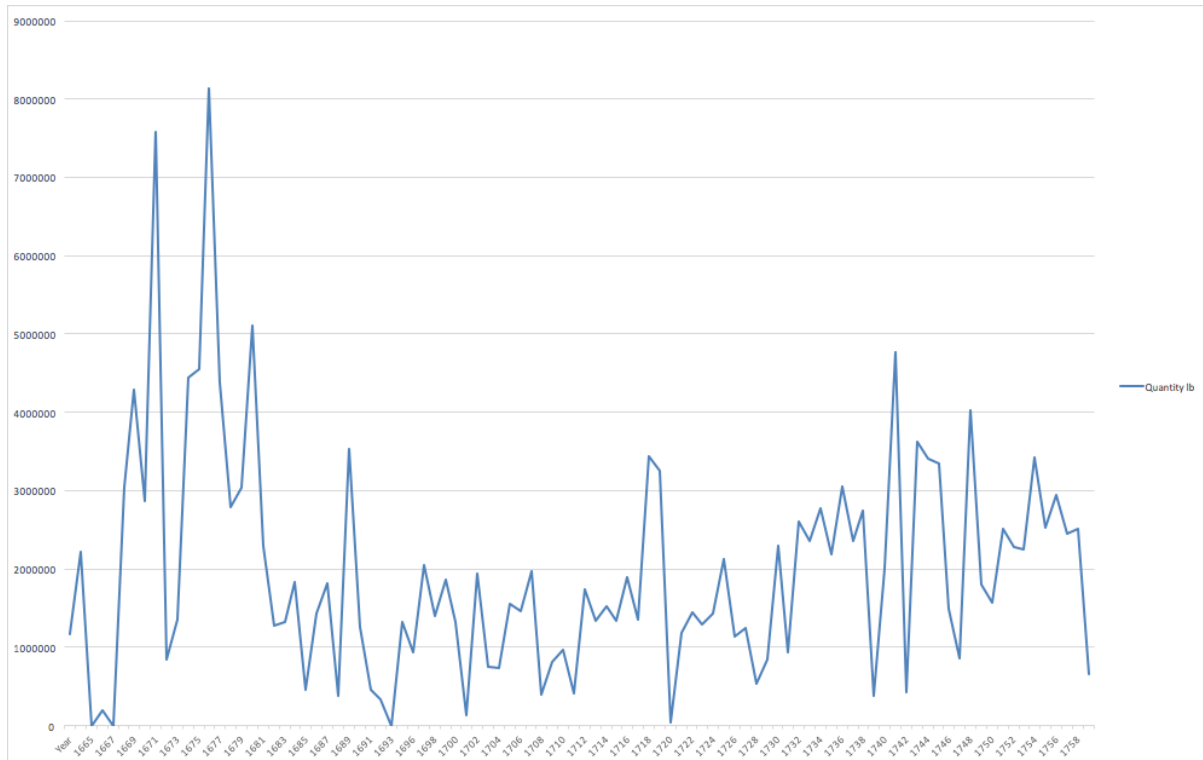
<sup>146</sup> *ibid*, p313

<sup>147</sup> Birdwood, (1892), p128

<sup>148</sup> Chaudhuri, (1978), p524-30



FIGURE 16 - PEPPER IMPORTS BY EIC (KN CHAUDHURI 1978)



The imported quantities (in lbs) indicate the variability and volatility of supply as seen in Figure 16. The company imported pepper from Malabar (loaded from Bombay), Madras, Bantam and Bencoolen. The data horizons are quite variable: Malabar data was available for 1664-1760, Madras only for 1703-1750 and the data for Bantam and Bencoolen was consolidated for 1664-1759. The combined data series given above has some limitations and gaps. The variability of the imports is quite high, with several years of no imports. Madras, Bantam and Bencoolen were the locations of EIC factories. Factories in this case were not of the modern, commonly held understanding of a manufacturing unit but were the combined office, trading post and warehouse of the EIC Factors. Factors were independent commission agents who bought and sold on behalf of their principals, in this case the EIC. Sometimes they were funded by the EIC or had their own long-term working capital. As time progressed, the factors became EIC employees and the trading posts slowly started to morph into becoming supply depots where EIC ships moored and loaded, becoming a branch office.<sup>149</sup>

<sup>149</sup> Foster, (1906), p46

FIGURE 17 - PEPPER VALUES AND PRICES (KN CHAUDHURI 1978)

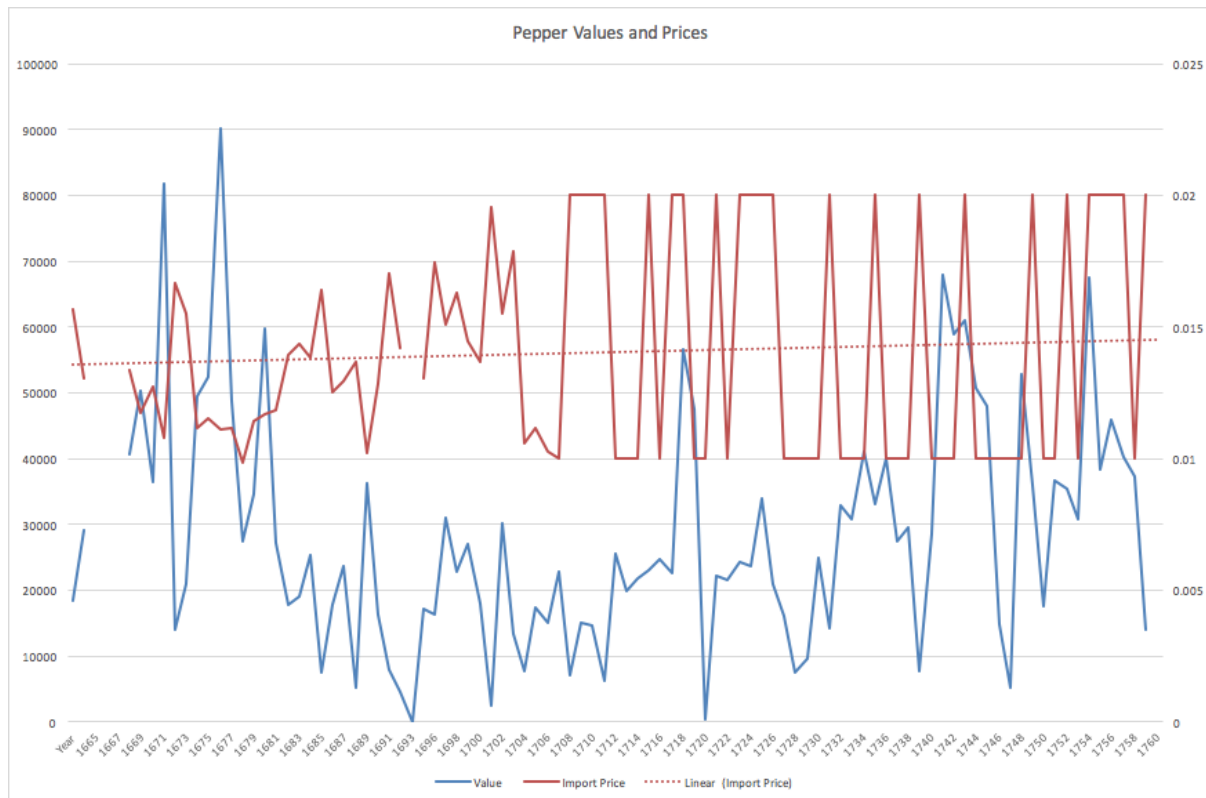
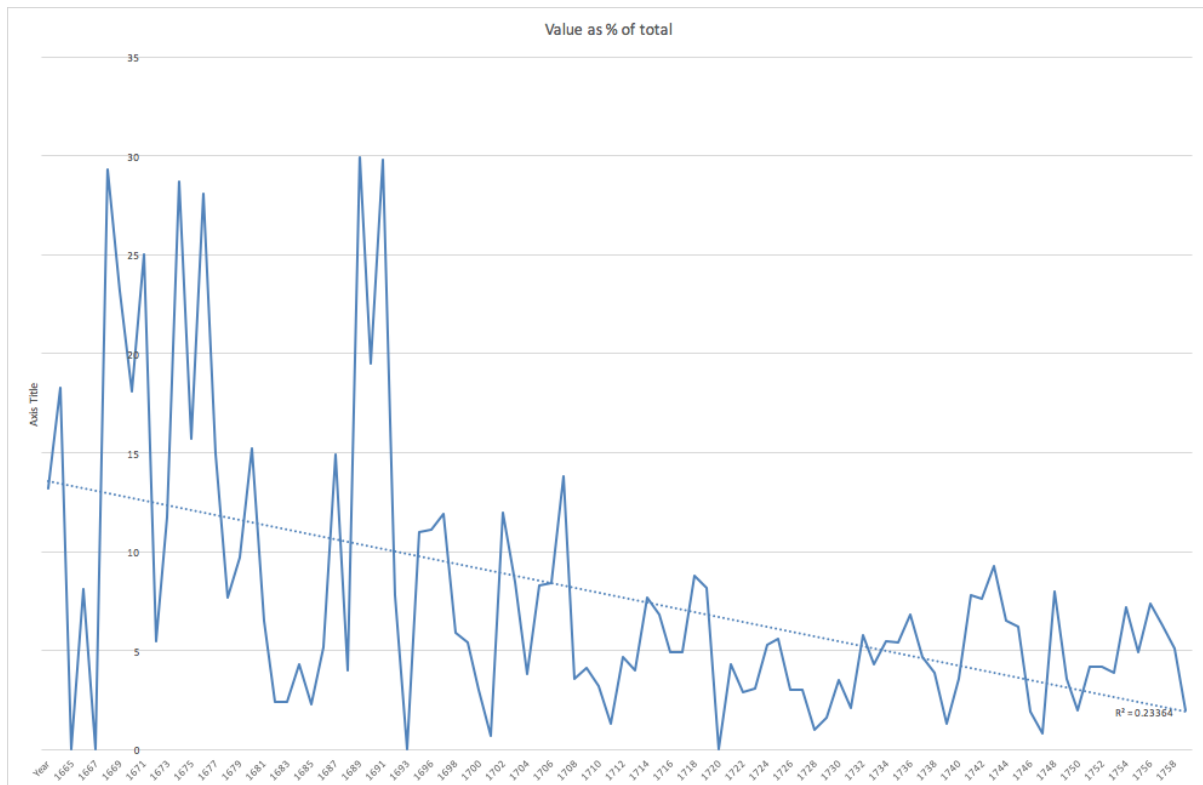


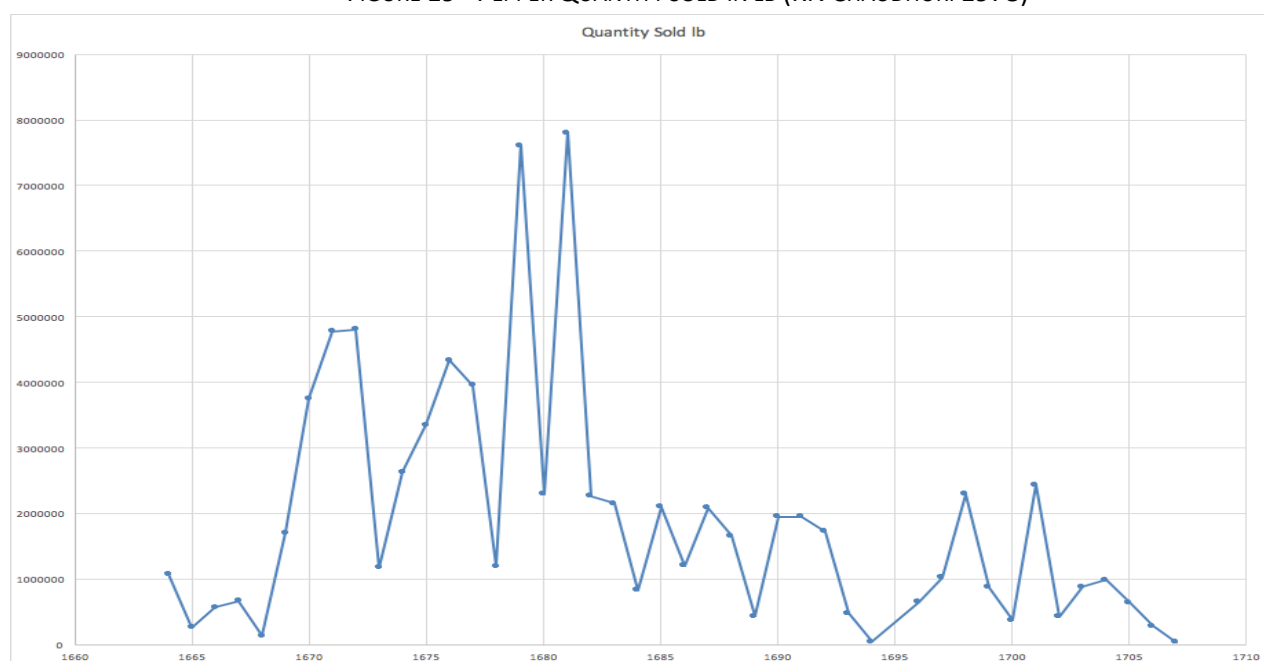
Figure 17 shows pepper values and prices. The blue line shows the value of the imports which follow the quantities; note the significant volatility in the price paid per lb, bouncing around £0.01 and £0.02. The dotted red line shows the trend. The hard red line shows a tale of two time periods: at the beginning there is much more volatility until about 1706 where the price seems to settle between a much broader range of 0.01 and 0.02. The records do not indicate why this price behaviour occurred; the only assumption one can draw being that around 1706, the EIC was able to monopolistically control the production of pepper and thus was able to address the prices on a year-on-year basis. The other explanation, as mentioned before, is that the EIC started to impose a maximum import price to maintain reasonable profitability on the upside or a limited loss on the downside. The high volatility of prices could be an indicator of the ferocious competition between the Portuguese, Dutch, and other European powers for pepper as well as variable demand/supply regimes. In addition, the EIC and other European firms actively expanded their pepper farming footprint; hence, an increased supply changed the situation. Regretfully, there is no way of comparing the actual supply chains, especially in India and Indonesia, therefore, this point cannot be proven.

FIGURE 18 - VALUE OF PEPPER IMPORTS AS % OF TOTAL EIC IMPORTS (KN CHAUDHURI 1978)



Chaudhuri also computed the value of pepper imports as a percentage of total imports, as seen in Figure 18. The clear trend is a steadily declining value from the beginning of the period, peaking at 29 percent of all imports being pepper, down to a sub 5 percent of the total imports. Curiously, despite this fall, it is a high amount and indicates the importance of this commodity that still commanded 5 percent of the total import by value. The amount may have fallen in the later stages, which will be confirmed by analysis of Huw Bowen's data in the next section. The reasons for the decline of the proportion or importance of pepper in the overall EIC import regime are multiple. The trade relationship matured, and types/values of imports widened/deepened, domestic tastes improved, the supply chain for EIC expanded, and EIC gained confidence and geographic footprint across Asia, importing a wider set of commodities and manufactured goods; these factors all helped to reduce the importance of pepper relative to overall imports. Prior to this, in the early seventeenth century, the ferocious competition with Portugal and the VOC meant that there was a single-minded and overbearing focus on pepper to the exclusion of other spices and goods. As the competition settled down and better supply chain decisions were taken, the relative proportion fell.

FIGURE 19 - PEPPER QUANTITY SOLD IN LB (KN CHAUDHURI 1978)



Chaudhuri also captured the data on pepper sold, which allows us to analyse more, although only for the 1664-1707 period, as seen in Figure 19. The amounts sold show significant variability, although it is not possible to judge if this relates to the quantities sold fresh or a combination of fresh and stored. It is also not possible to judge if the sales were for domestic or re-export reasons. The records do not indicate why there were such high spikes in sales from 1670-1681. Comparing this period with the value sold, it also corresponds to a high value, which could potentially lead to the assumption that a pepper bubble formed over this decade. The Sumatran factory of Bencoolen was established between 1660-1685, which overlaps this period and that could have boosted the supply, although that contradicts the higher value, as one would expect the value to drop, assuming demand was the same. Cochin fell to the Dutch in 1663 and that could also have driven up a need to corner as much pepper as possible to avoid the near monopolistic Dutch behaviour seen in Indonesia earlier.

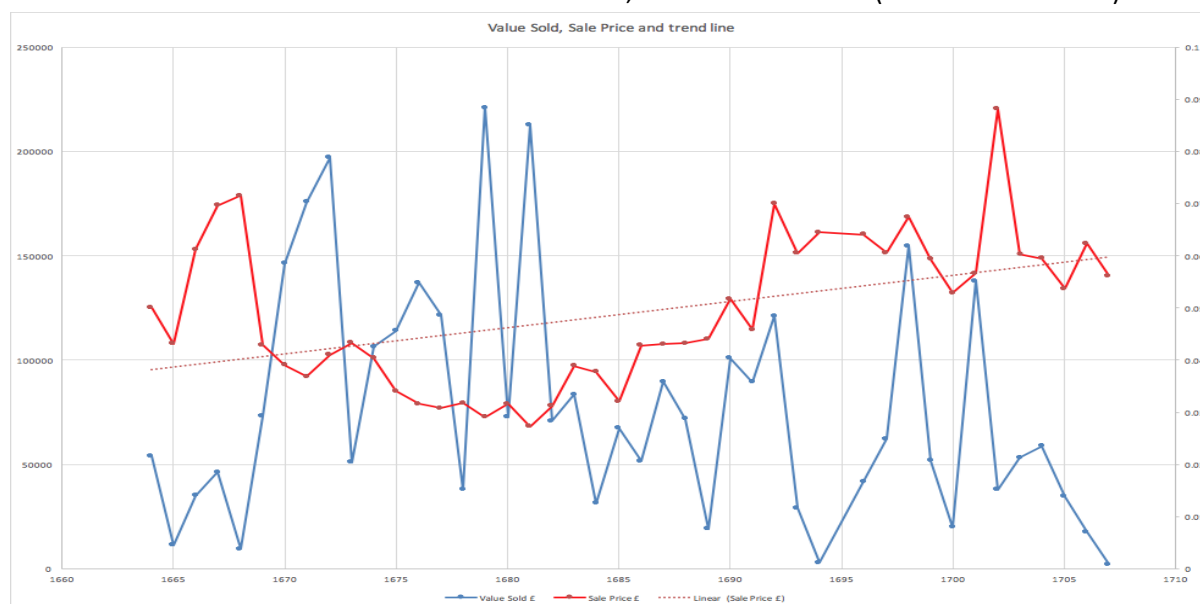
An interesting court minute sheds light on what the company did with the pepper:

“A Court of Committees for the Fourth Joint Stock and Second General Voyage, August 28, 1650 (Court Book, Vol xxi, p14). Allowance made to Mr Clutterbucke for damaged cotton yarn and some rotten cotton yarn sold to him at 12d per lb. Resolved that a division of 25 percent in pepper, from that returned in the Ruth and what is remaining of the old store, shall be made to the adventurers in the Second General Voyage. It is also resolved that as the debt at interest for the Fourth Joint Stock is grat, a division of 50 percent in pepper shall be made to each adventurer in that stock, the said pepper to be paid for at 12d per lb at five or six months from Michaelmas; every man to pay in his money or give security for the same and to take away his pepper before Lady Day; no pepper to be removed before payment is made, and any pepper left to be sold by the candle; any loss arising to be charged to the account of those who have not taken away their pepper, and any profit made to accrue to

the company. Certain committees are requested to examine and report on damaged pepper returned in the Ruth.”.<sup>150</sup>

As can be seen from this note, the company paid for interest from stored pepper and thus would be accounted for before any sale to the public by the candle.

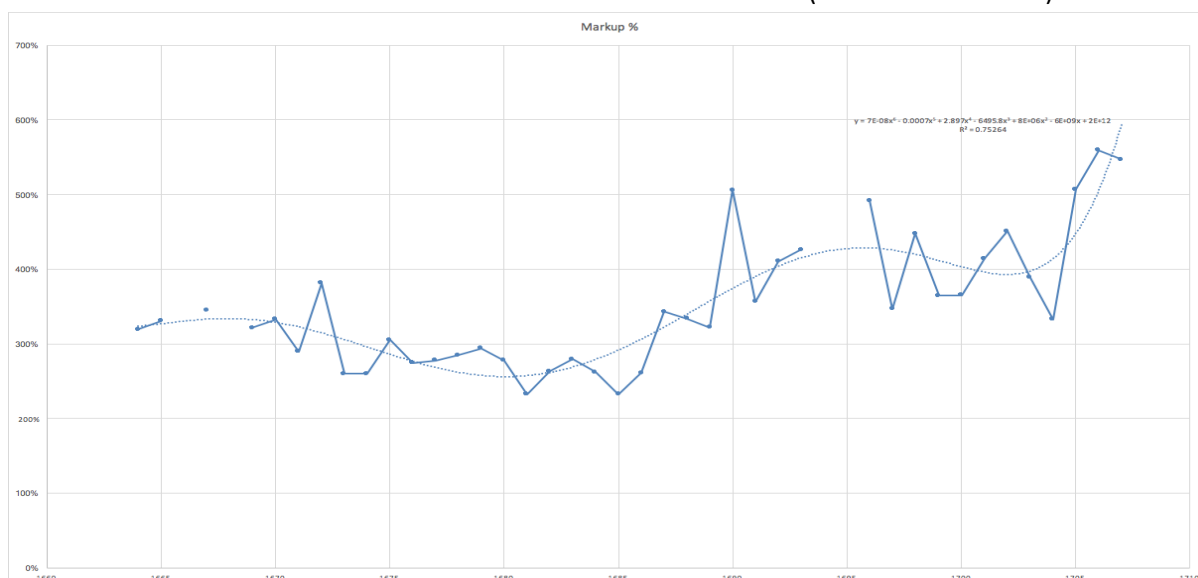
FIGURE 20 - VALUE OF PEPPER SOLD, SALE PRICE AND TREND (KN CHAUDHURI 1978)



The curious difference between the import price and the sale price, as can be seen in Figure 20, indicates that the company had more control over the sales price and despite arguments made above about increasing production and competition, the long-term trend line clearly indicates that the sales price kept rising. In earlier years, the EIC sold all, but as time progressed, it was able to control the sale price more by establishing candle auctions at the four quarterly sales. It was divided into lots and put up for sale at definite set minimum prices. Free bidding among buyers then determined the last price at which pepper was sold. The value of inflation could potentially have an impact here, but given the paucity of data, it is impossible to prove. It is noteworthy that the EIC frequently imposed a maximum purchase price-much to the irritation of the local factors. The advantage of this was that the downside of losses at worst or a reasonable return at best would be maintained. The EIC minute books did not reveal any details on spice price/quantity management other than notations that so many commodities were sold. This level of detail was potentially noted and destroyed on a regular basis, as they did not form the formal records of the firm.

<sup>150</sup> Sainsbury, E B. (1922), p55

FIGURE 21 - PEPPER MARKUP WITH TREND LINE (KN CHAUDHURI 1978)



The markup (calculating the ratio of the sales price versus the import price) is given in Figure 21. A significant markup indeed, that keeps rising to an impressive 559 percent towards the end of the period. The underlying reasons are difficult to determine, but the analysis below can shed some light on changes in wages, demands, etc.

FIGURE 22 - RATIO OF SOLD / IMPORTS OF PEPPER IN LB (KN CHAUDHURI 1978)

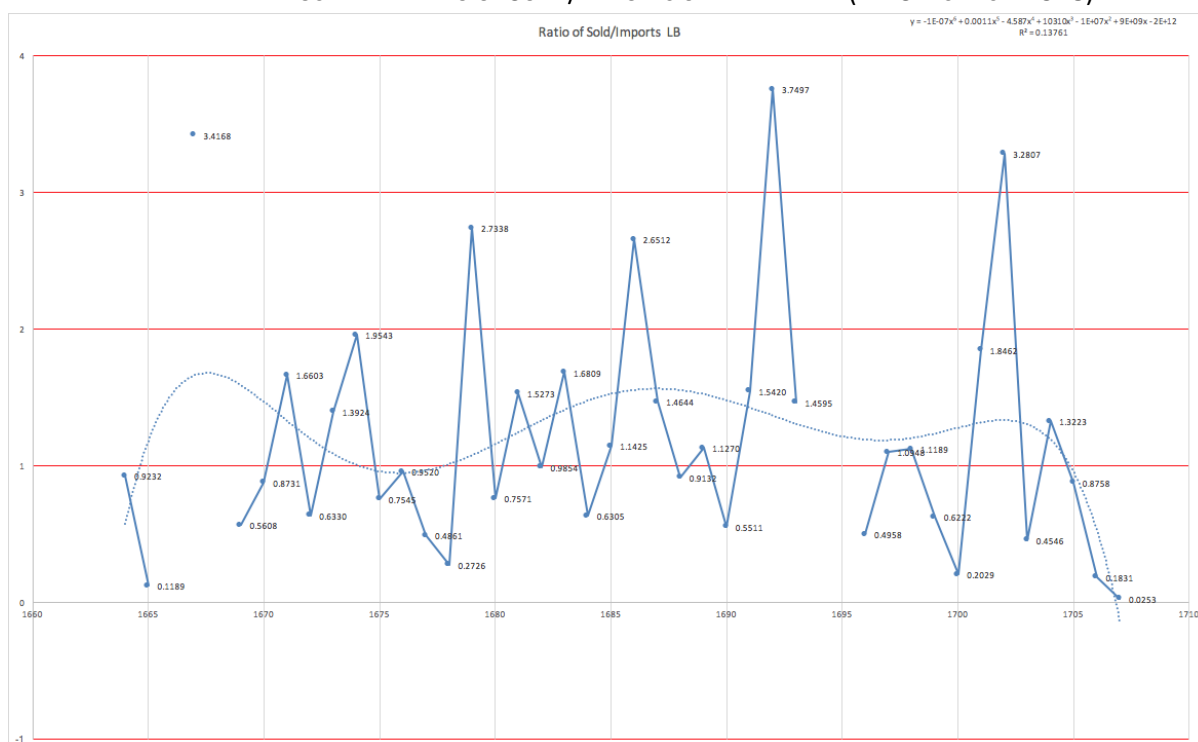


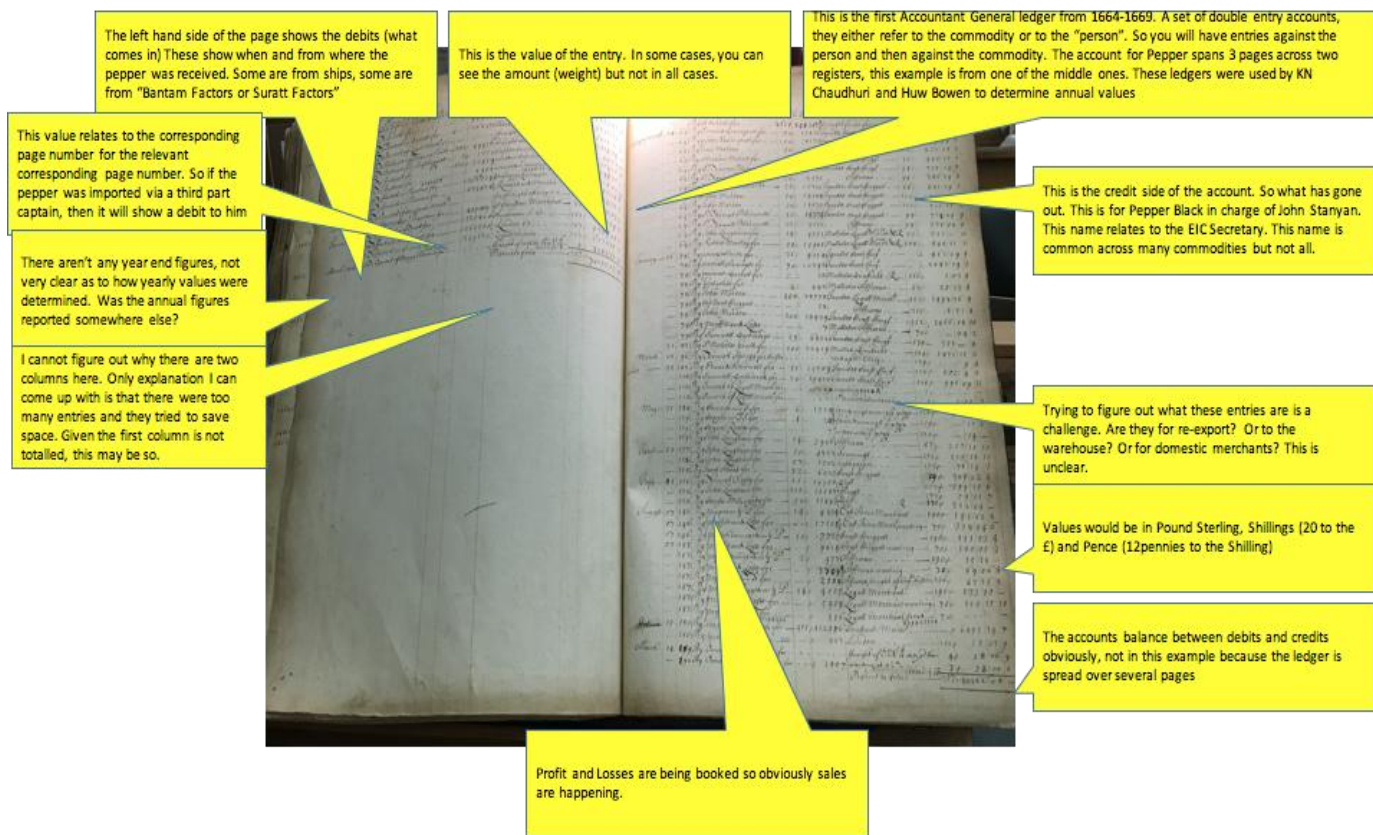
Figure 22 takes the ratio of the amounts sold to the amounts imported from Malabar (loaded from Bombay), Madras, Bantam and Bencoolen. If the value is below 1, then the company is selling less than what was imported and if the value is more than 1, then the company is selling more than it is importing. This is assuming that there is no forward selling of cargos; there has been no evidence

that the EIC undertook forward sales. Figure 22 allows several conclusions to be drawn. Given that some of the ratios are more than 2, and none are less than 0, this means that there were additional imports from the continent, perhaps purchases from Amsterdam or elsewhere. In other words, even if the company stored an entire year's worth of pepper imports, it would not be sufficient to justify the excess amounts. The correlation between the markup and ratio is -0.15, indicating a negative relationship. So, if the mark-up went up, the ratio fell up to approximately 15 per cent and vice versa. There is no causality inferred nor assumed, but given this relationship, it could indicate that high mark-ups meant that the company held back sales to ensure the profits were kept high. Moreover, there was some certainty for the buyers that not too much pepper would be released into the market and thereby flood it. The four quarterly auctions and reserving pepper indicate that buyers were happy to work in this oligopolistic market and gradually increase the prices. The increasing control over the production of pepper in India and Southeast Asia meant that the company kept the input prices relatively constant, while the sale price went up, therefore increasing the markup. A review of the EIC minutes did not elicit any proof about active sales management to maintain the markup, although the data shows this behaviour.

### **2.6.2. Reviewing the Accountant General Journals to elicit raw data.**

An attempt was made to recreate the Chaudhuri dataset for other spices by reviewing the EIC Accountant General ledgers. The earliest data available in the Accountant General ledgers starts from 1664, which explains why Chaudhuri selected this odd date as the start of his time series. The ledgers provide entries for various spices. In the first two ledgers of this period, there were journal entries for mace, turmeric, cassia/cinnamon, cardamom, cumin, ginger, and spikenard. Pepper was divided into black pepper, damaged pepper, and white pepper. It is not possible to track down which entries are related to ships, warehouse master, or captains, or if the ledgers are related to company trade or private trade. There were journal entries for individuals, which further included spice data-indicating that EIC staff also traded on their own account. Finally, several accounts were obviously for staff who had died in post, and therefore their final effects were shipped over with or without valuation of several items. It could be assumed that these people were factors.

FIGURE 23 - ANALYSING THE EIC ACCOUNTANT GENERAL LEDGER PAGE



A deconstruction of a typical ledger page is given above in Figure 23. Given the lack of any explanatory comments on Chaudhuri's dataset, the idea of recreating the dataset for other spices could not be adopted.

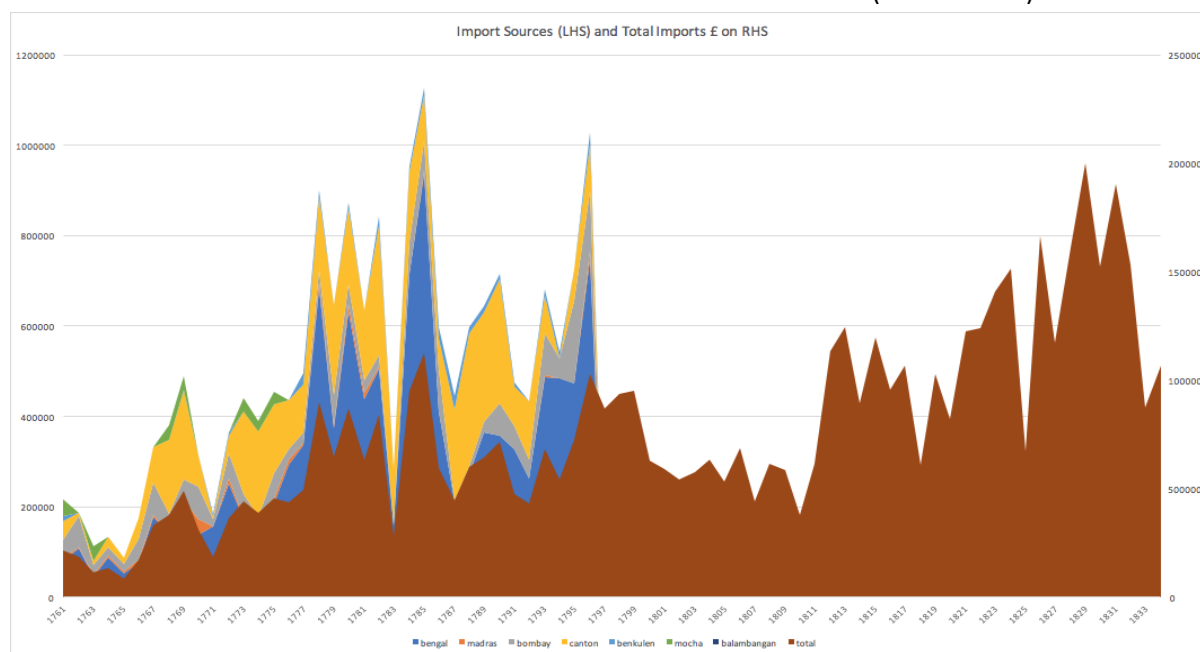
### 2.6.3. The Huw Bowen Dataset

The other available dataset is by Huw Bowen.<sup>151</sup> It starts at 1755, around the end of Chaudhuri's dataset, which is 1760. This dataset covers much of the economic activity of the EIC, but the figures for spices are consolidated into a miscellaneous category, which does not allow a merge with Chaudhuri's dataset. Still, some analysis of EIC's overall economic activity with this data can provide some context for the spice import and sales activity.

<sup>151</sup> Huw Bowen (2007)



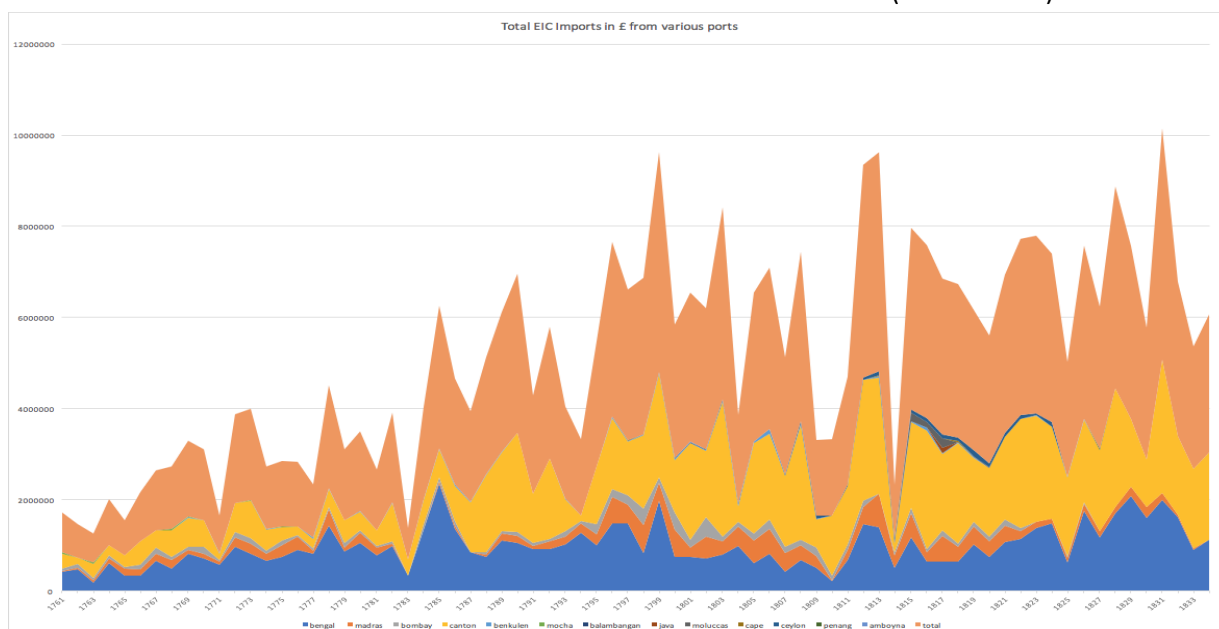
FIGURE 24 - IMPORT SOURCES AND TOTAL IMPORTS (BOWEN 2007)



The steady increase in miscellaneous (including spices) imports (brown area) while being volatile is clear, as in Figure 24<sup>152</sup> What is interesting is to see the prevalence of the Bengal (blue) and Canton imports (yellow). Canton was, of course, silk, while Bengal was for many other commodities, including cotton and textiles. Curiously, the amounts imported from Madras and Bombay were comparatively low in value.

<sup>152</sup> No. of entries = 326; numeric variable = invoice value in £s. Source: *EIC Commerce Journals*, L/AG/1/6, vols. 14 – 29. The spreadsheet details and aggregates the invoice value of the miscellaneous commodities imported from the places noted in the column headings between 1760 and 1834. Early in the period those goods denoted here as ‘miscellaneous’ were chinaware, spices, drugs, peppers, and raw silk, but after 1790 raw silk and other raw materials such as saltpetre, cotton, and indigo came to the fore.

FIGURE 25 - TOTAL EIC IMPORTS FROM VARIOUS PORTS (BOWEN 2007)



The total imports match the miscellaneous figures reported in Figure 25 with the biggest share from Bengal and Canton. There are significant issues in the data as reported by Huw Bowen.<sup>153</sup>

<sup>153</sup> As noted by (Bowen H. , 2007), no. of entries = 1050; numeric variable = invoice value in £s. Source: *Commerce Journals*, L/AG/1/6, vols. 14 – 29. The spreadsheet aggregates the total invoice values in spreadsheets 13 to 15 to generate an overall annual value for the commodities imported by the Company from the places noted in the column headings between 1760 and 1834. For 1814, when the Company's accounting year was adjusted (see above), it has not been possible to reconcile the aggregated invoice value of tea, textiles, and miscellaneous imports recorded in the *Commerce Journals* (and noted in spreadsheets 13, 14, and 15 above) with the total value of the individual ship invoices detailed in the *Journals* and entered this spreadsheet. It is not clear why the two totals fail to correspond.

FIGURE 26 - COMMODITIES AND TOTAL INCOME (BOWEN H, 2007)

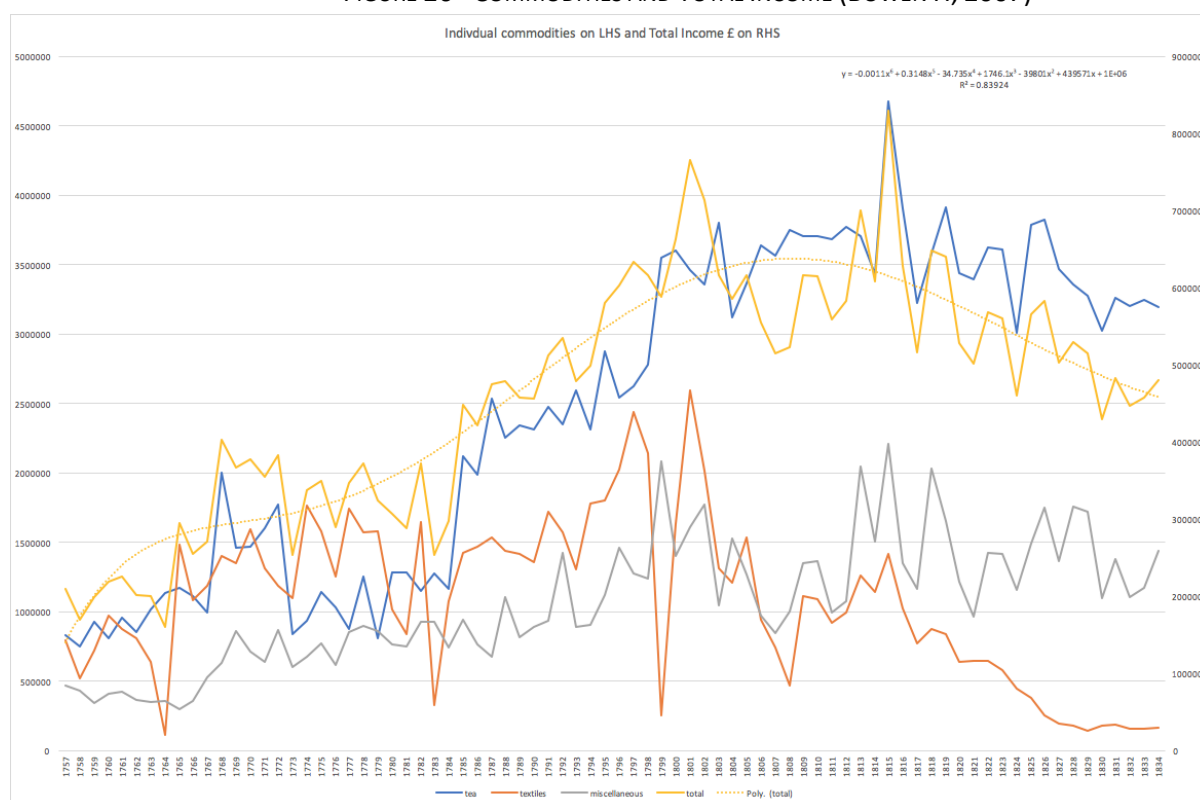


Figure 26 shows the cash income from individual commodities and total income.<sup>154</sup> The total income rises sharply and then starts to reduce gradually. Interestingly, the miscellaneous income (containing spices) seems to hold up, while the value of tea is starting to show a reduction, but not as much as that of textiles, which goes into a steep decline. The reasons for this decline could be because the industrial revolution and mechanisation started improving domestic English production of textiles rather than imports of muslin and cotton. Additionally, independent and new sources of cotton from the USA for local English domestic manufacturers further reduced the income for the EIC, who imported textiles from India.

<sup>154</sup> As noted by (Bowen H. , 2007) No. of entries = 312; numeric variable = cash received in £s. Source: *Cash Journals*, L/AG/1/5, vols. 17-34. - 12 - The spreadsheet details cash received by the Company from its sales of imported commodities between 1756 and 1834. The annual totals of cash received have been calculated by aggregating the monthly figures recorded in the Cash Journals. The column headings 'Tea,' 'Textiles' 'Miscellaneous' refer to the Company's three series of commodity ledgers - the tea ledger; the calico ledger; and the drugs and chinaware ledger - in which sale income was recorded before monthly totals were copied then across to account headings in the Cash Journals. For the commodities allocated by the Company to the miscellaneous 'drug and chinaware' category, see 15. 'Imports Miscellaneous,' above. The sale income relates only to goods sold on the Company's own account and it does not include any income received (and subsequently paid out after the deduction of charges and duties) for goods sold on behalf of individuals who were licensed to import from Asia on private account and were then obliged to dispose of their commodities at the Company's sales. It should also be noted that after the receipt of deposits and cash payments from purchasers, the Company had to pay out for customs duties, freight, and 'charges on merchandise', and thus the figures should properly be regarded as gross income from the sale of goods.

FIGURE 27 - CUSTOMS AND EXCISE DUTIES PAID (BOWEN 2007)

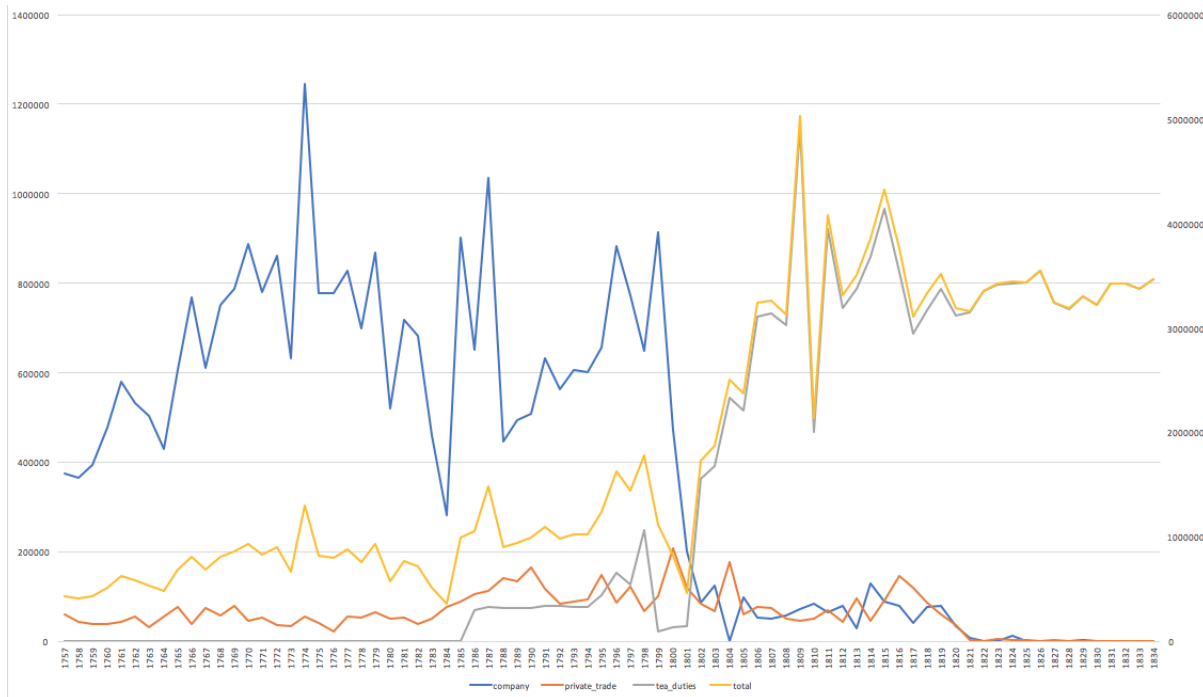


Figure 27 shows the values of the excise and customs duties paid by the company and must be interpreted with care due to structural changes in the series.<sup>155</sup> If we merge the blue and grey lines, it shows a consistent rate. However, the intriguing element is the collapse of the private trade towards the end of the period. The only explanation for this collapse is the EIC clamping down on such private trade transactions and stopping the use of EIC ships to conduct private shipping.<sup>156</sup> There is a further discussion on customs and duties later in this chapter.

#### 2.6.4. Customs and Port Data

<sup>155</sup> As noted by (Bowen H. , 2007) No. of entries = 312; numeric variable = cash paid in £s. Source: General Ledgers, L/AG/1/1, vols 20-31. The spreadsheet details and aggregates the distinct types of payment made to government by the Company for customs and excise duties between 1756 and 1834. Column 1 'Company' contains details of customs payments for commodities imported by the Company on its own account, and column 2 'Private Trade' contains details of payments made by the Company for private trade goods imported by licensed individuals who were permitted to import certain commodities on board the Company's ships. This scheme of arrangement is necessary because, in addition to paying duties on its own imports, the Company was also responsible for both collecting and paying the duties on any imported private trade goods. It did this by receiving duty payments from the importer and then passing them on to government. Column 3 'Tea Duties' contains details of payments made in relation to tea duties that were recorded separately from other payments after 1785. Before that date, all payments made to government for duties levied on any type of imported goods were described simply as 'customs' in the General Ledgers. Thereafter, because of William Pitt's Commutation Act of 1784, a distinction was made between, on the one hand, the customs duties levied on rated and unrated goods, and, on the other hand, new duties on tea which included an excise duty as well as an *ad valorem* customs duty. It is details of these new tea duty payments that are presented in Column 3. Taken together, therefore, the three columns in the spreadsheet represent the total value of duty payments made on all commodities imported into London on both Company and private account, on board the Company's ships between 1756 and 1784.

<sup>156</sup> Erickson, (2014), p74

Given the challenges with the Chaudhuri and Bowen datasets and the issues around the India Office records, the customs records were investigated at the National Archives.<sup>157</sup> These ledgers<sup>158</sup> relate to CUST 3 1697-1780 *Ledgers of Imports and Exports*.<sup>159</sup> There are no customs ledgers prior to 1696. This set of ledgers shows the data up to 1780.<sup>160</sup> One can see the origin of the goods and the folio number for London and other ports. In this case, the first entry is for Africa and then ongoing to East India and various other countries/cities/ports of origin.

FIGURE 28 - DESCRIPTION OF CUSTOMS LEDGER DATA (UK NATIONAL ARCHIVES)

The column headings as seen in Figure 28 are.

1. Where imported and from whence?
2. Goods Imported
3. In English Ships
4. In Foreign Ships
5. To the sum of the original value of
6. The Amount of the Value
7. Subsidy
8. New Subsidy
9. Additional Duty

<sup>157</sup> <http://discovery.nationalarchives.gov.uk/browse/r/r/C5580>, accessed September 5 2020, archived /web/20200905170301/http://discovery.nationalarchives.gov.uk/browse/r/r/C5580

<sup>158</sup> It was not possible to get access to the physical ledgers, only scanned ledgers were accessible at the National Archives.

<sup>159</sup> Ledgers showing the nature and quantity of goods imported and exported at the Port of London and the Outports, and the countries abroad exporting or importing. Distinction is made between goods of English manufacture and foreign merchandise and between those carried in English and foreign ships. The ledgers also contain tables showing the amount of foreign gold and silver coin and bullion exported each year.

<sup>160</sup> Clark, (1938), xvi, p211

10. Old Import & import on Tobacco, Wine & Vinegar
11. New Additional Imports

The first line says that the entry is for London from the East Indies. Then in vertical, lettering Drugs = Vocal, the top line continues saying it is for green ginger and then the values. The data collected was primarily from India, although other countries were also checked. In many registers, the ink was very faded, so it was difficult, if not impossible, to make out the data. Without having access to the original registers, one could check no further. The highly stylistic cursive handwriting also caused further deciphering challenges.

It is noteworthy that the customs duties and standard prices were usually frozen for decades, so the valuations are clearly not reflective of market conditions, which is reflected in the previous figures and tables from the Chaudhuri and Bowen datasets, where the purchase, import and sales prices were very volatile. Crouch provides a good overview of the Books of Rates and its developments.<sup>161</sup> There are also reports of corruption in the port and customs service to keep the valuations low. A total of 1226 records was captured. Some names were edited for consistency purposes (such as combining musk and musk cods, nuttmegs and nuttmegs combined to nutmeg). Dry spice and oils (such as musk oil and musk, or cinnamon oil and cinnamon) were not combined. Some forcible distribution into single years was undertaken, as some years covered two years (1696-97, 97-98). Table 9 shows the spice data points extracted:

TABLE 9 - CUSTOMS DATA SUMMARY (UK NATIONAL ARCHIVES)

Spices	Records	Spices2	Records3
Nutmeg	121	Camphire Unzef	10
Pepper	83	Mace	9
Tamarinds	78	Galanga	5
Musk	77	Olibanum	5
Myrh	71	Opium	4
Cardemons	70	Fennell Seeds	3
China roots	68	Cloves Preserved	2
Long Pepper	68	Dry Ginger	2
Tumerick	68	Franckinsence	2
Green Ginger	67	Oyl Mace	2
Sanguis Draco	67	Turbith	2
Cassia lignea	64	Zedoria	2
Alsa fatida	63	Anniseeds	1
Spikenard	59	Chocolate	1
Cloves	37	Dtto Codds	1
Cinnamon	36	Ginger Dry	1
Pearl Seed	30	None	1
Oyl Cinnamon	27	Saffron	1
Cummin Seed:	18	Grand Total	1226

The major spices were analysed for the weight of the imported spices. The pattern and magnitude of the imports on which customs data was levied can provide information on the spice supply. The value of the cargo is meaningless due to the customs rate being completely outdated over decades and subject to incomprehensible changes owing to corruption, petitions, or other factors.

<sup>161</sup> Crouch, (1726)

FIGURE 29 - CUSTOMS DATA – CARDAMOM (UK NATIONAL ARCHIVES)

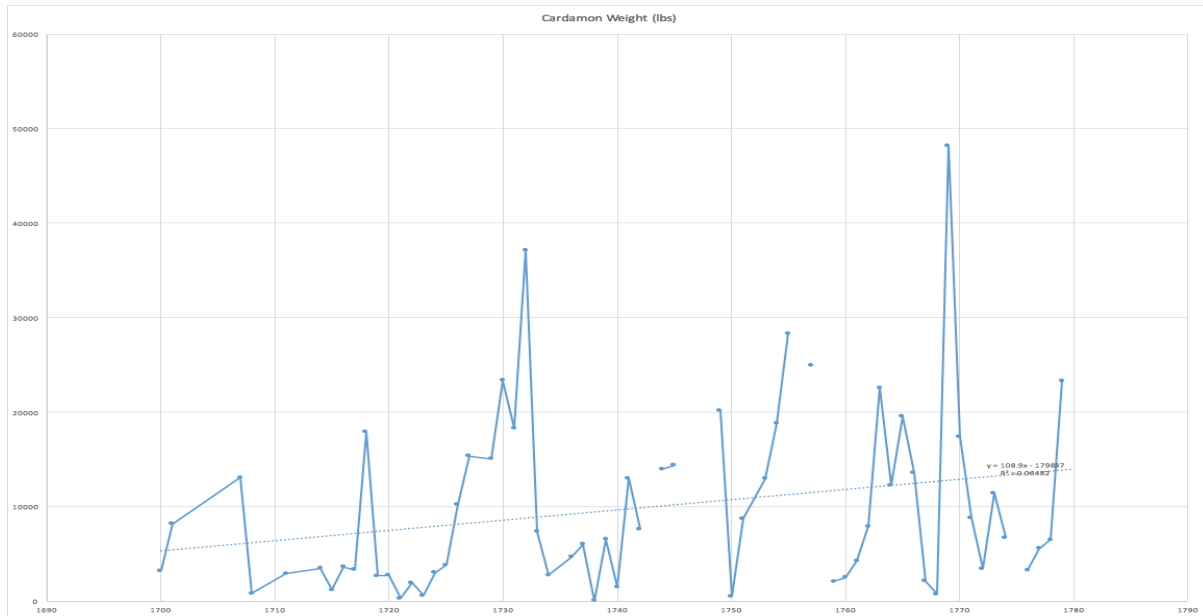
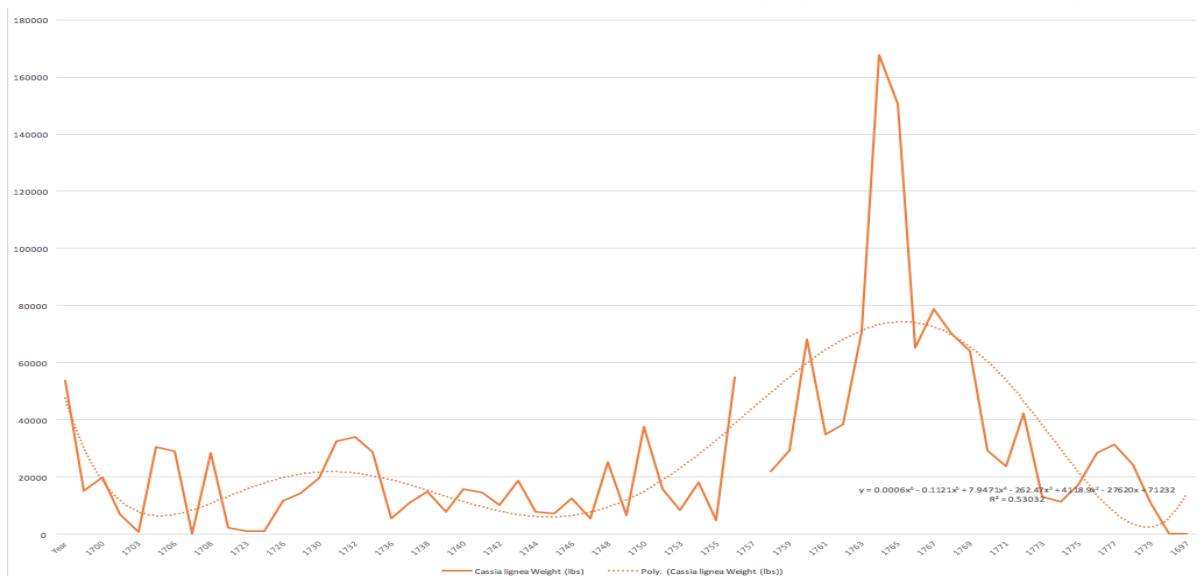


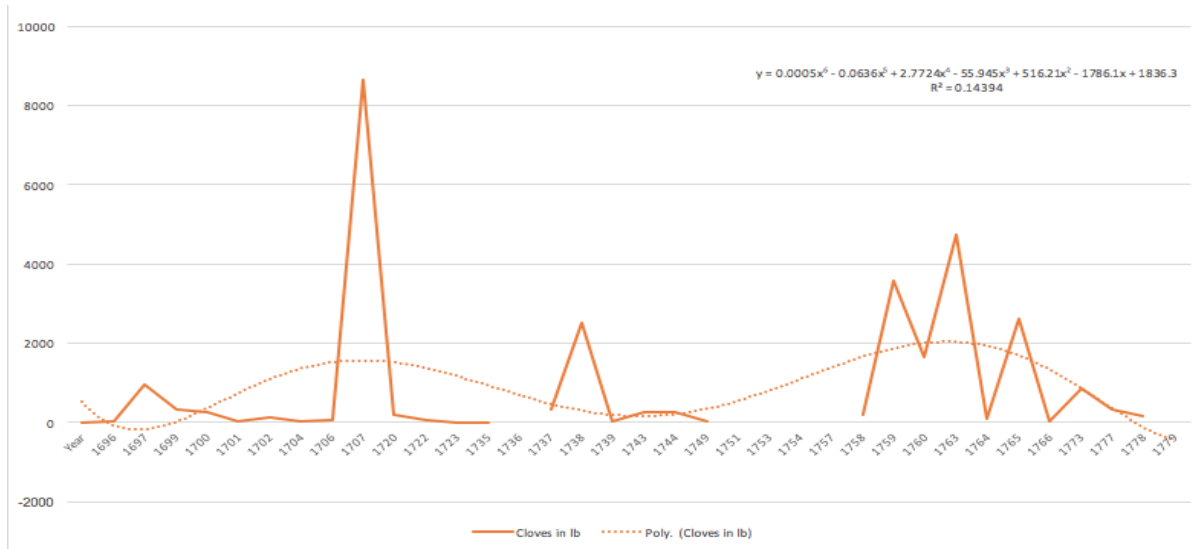
Figure 29 shows a highly volatile record of importing cardamom, with an increasing trend line and an interesting spike during 1770. It is impossible to establish the reason for such volatility. It certainly is not a demand-led issue, as cinnamon in the early to mid-eighteenth century did not show sudden changes in usage. Hence, the only element to explain the spike would be a supply surge, either because of a great harvest or the fact that other competitors, such as the Dutch, did not pick up their cargoes. Furthermore, as one can observe, having one customs value when the supply is so variable is meaningless. Changes in supply, even if one assumes demand remains constant, will change the prices and values.

FIGURE 30 - CUSTOMS DATA - CASSIA LIGNEA (LBS) (UK NATIONAL ARCHIVES)



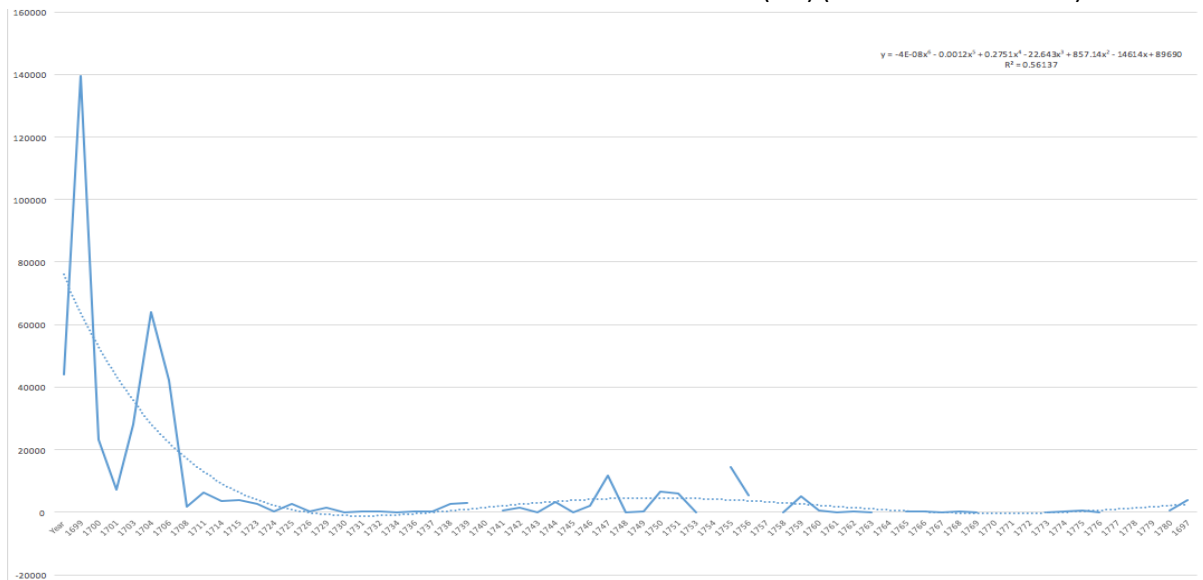
Cassia Lignea, or Chinese cinnamon, is a close relative of Ceylon cinnamon. We again see in Figure 30 a significant volatility in the amounts imported, which then ends up spiking around the 1765 period, before dropping precipitously.

FIGURE 31 - CUSTOMS DATA - CLOVES (LBS) (UK NATIONAL ARCHIVES)



Cloves in Figure 31 show low levels of imports, with a few years where the volume spikes significantly in 1707, 1738 and 1763.

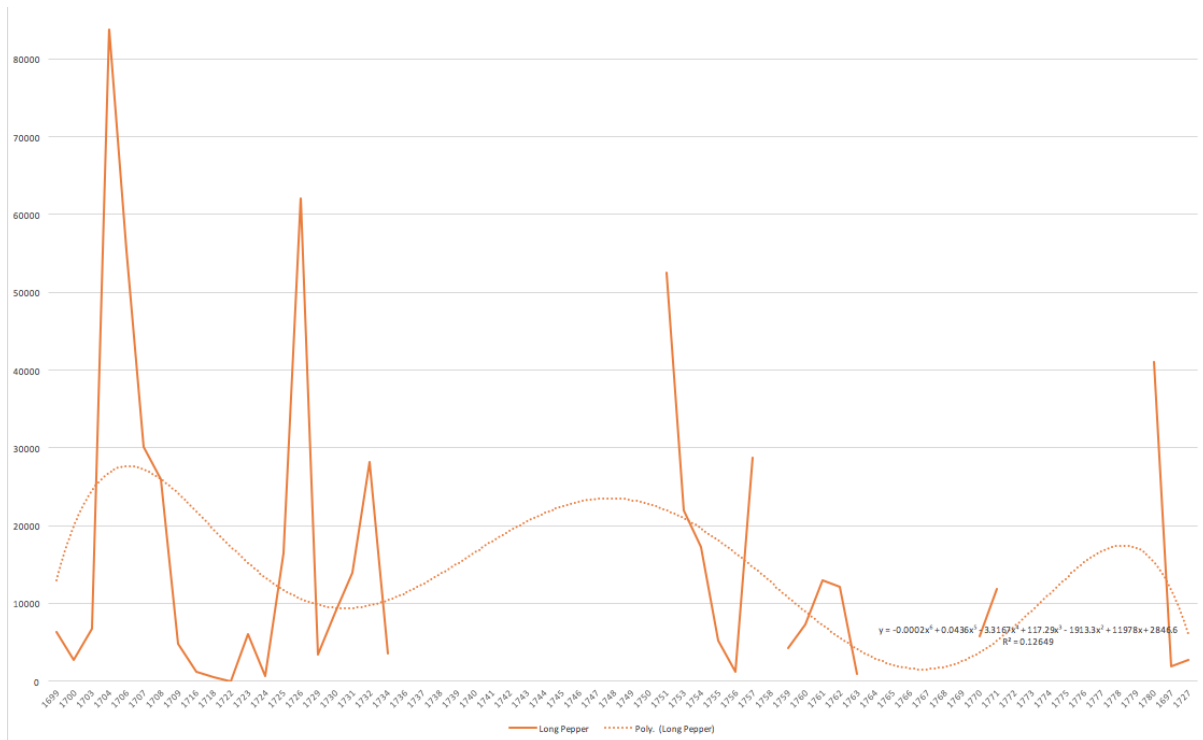
FIGURE 32 - CUSTOMS DATA - GREEN GINGER (LBS) (UK NATIONAL ARCHIVES)



Green ginger has its major import phase early in the period and then the amount ordered falls off and stays minuscule for the remainder of the time span, as seen in Figure 32. This could be because of an increase in the production of ginger, or it may have been easier to import dried ginger.

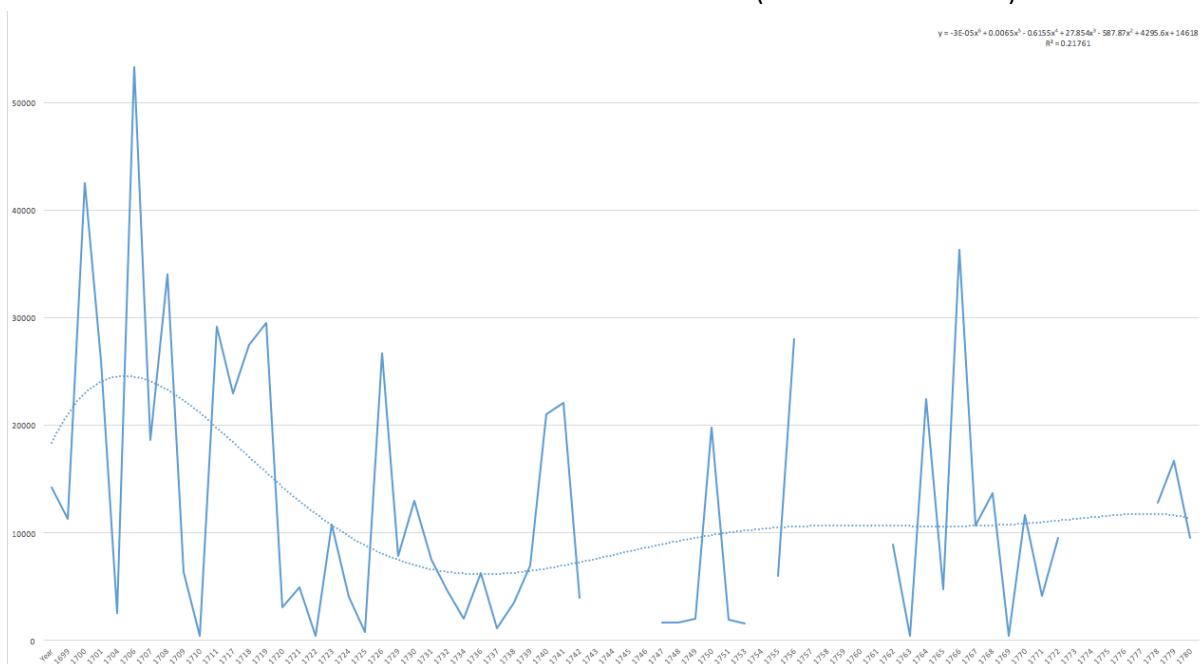


FIGURE 33 - CUSTOMS DATA - LONG PEPPER (UK NATIONAL ARCHIVES)



Long pepper, in Figure 33, has an interesting, if very volatile relationship with Europe, with it being mentioned frequently by the Greeks and Romans as a medicine. Its usage then fell off as normal pepper took over; hence, its variability in imports, above, is curious, as one would have expected little import of this spice.

FIGURE 34 - CUSTOMS DATA – MYRRH (UK NATIONAL ARCHIVES)



While not technically a spice (as in used in food), Myrrh in Figure 34 is a product of a shrub and is used for medicines and incense. It also has significant Christian religious significance, and therefore a strong demand-albeit variable weights with a strong flat trend line is an indication that this was a common import.

FIGURE 35 - CUSTOMS DATA - PEPPER (LBS.) (UK NATIONAL ARCHIVES)



Pepper, which is the staple import amongst all spices, shows a spike at the beginning and then a non-variable import pattern in Figure 35. If we compare the Chaudhuri dataset with the customs data for the same period, there seems to be significant under-reporting in the customs data. Either there is a data collection issue, or the EIC was under-reporting imports by up to 50 percent, or there were direct imports outside EIC control (which is surprising as the EIC had monopoly import rights). It may also be that Chaudhuri is mixing all grades of pepper in his dataset, which could reduce the variance. For example, in 1703, customs reported 414,067 lbs, while Chaudhuri reports 1,940,752 lbs; for 1710, it was 377,023 lbs for customs and 808,825 for Chaudhuri and finally for 1727, customs reported 1,443,280 lbs, whilst the equivalent for Chaudhuri was 1,144,112 lbs. Some years it was higher, but mostly the customs data was lower compared with the EIC's data. However, without more information, it is difficult to give any logical explanation for this variance. Chaudhuri does not remark on any under-reporting in his book; therefore, it is impossible to explain why this happens. Regardless, the amounts of damaged, white, and long pepper were minuscule compared to normal pepper, so it would not make a major difference.

FIGURE 36 - CUSTOMS DATA - TAMARIND (LBS.) (UK NATIONAL ARCHIVES)

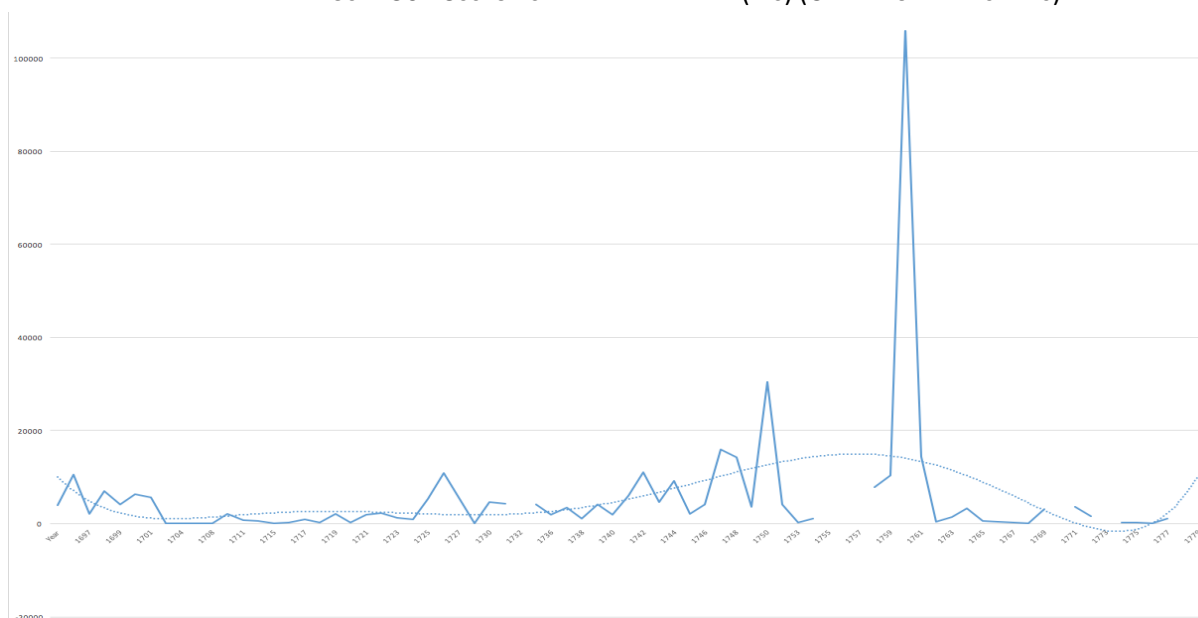
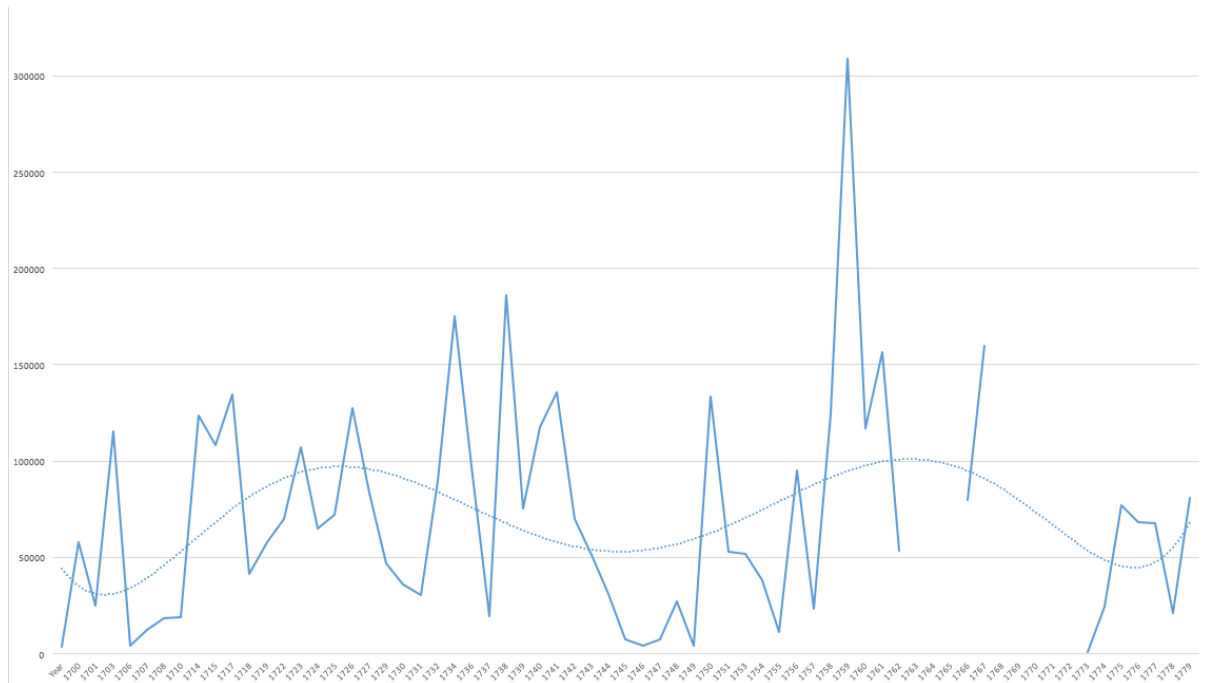


Figure 36 shows tamarind, a spice not commonly known in England, but it curiously shows up in purchase records for a variety of organisations such as the Navy. The only potential use identified for tamarind was in sauces, such as Worcestershire sauce in the early nineteenth century, which is much later than this customs data period.<sup>162</sup> No other English early modern cookbook or receipt book mentions the use of tamarind. Other than a spike at one point, most of the imports seem to be stable and of a low magnitude.

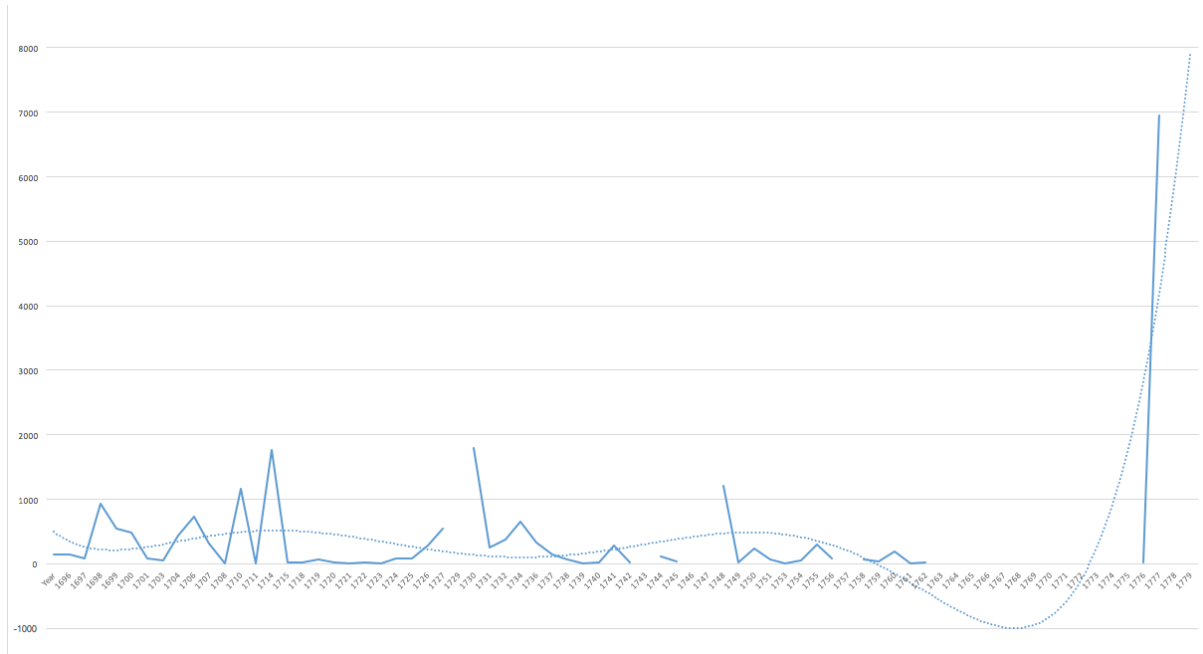
FIGURE 37 - CUSTOMS DATA - TURMERIC (LBS) (UK NATIONAL ARCHIVES)



Turmeric has been used as a colourant, medicine and, of course, food, spice, hence a high degree of imports is called for, with a good and stable trend line as shown in Figure 37.

<sup>162</sup> Shurtleff and Aoyagi, (2012), p172

FIGURE 38 - CUSTOMS DATA - NUTMEG (LBS) (UK NATIONAL ARCHIVES)



Finally, the nutmeg spice customs data in Figure 38 shows the characteristic variability, again emerging from the intense competition from the Dutch. The spike at the end is uncharacteristic in nature and cannot be logically explained for that level of import. Other than that spike, the trend line shows a broadly flat import figure. In conclusion, the customs dataset shows that the valuation is meaningless due to the customs duty data challenges. However, the weights/amounts imported provide an interesting and different aspect to the ledger reports of the EIC, especially when looking at the pepper values. Comparing that with Chaudhuri's dataset, in most years that overlap the two datasets, the customs data showed significantly lesser amounts of pepper imported through the ports. This could be another area for further research to determine why there is a difference between the customs and the EIC reports. One reason could be to avoid payment of customs duties. Other reasons could be a vast amount of smuggling or a challenge with data collection and reporting.

### 2.6.5. Storage and warehousing of spices in London

In Section 1.8 there was mention of a difference between the volume imported and the amount sold. If there were more sales than imports, the gap would either be met from storage or from imports from other sources. The data from the customs journals shows that the actual imports were low; therefore, it must be a combination of storage and imports from other sources. It is difficult to store spices, which, by their very nature, are grown and dried in tropical lands. If they are stored for too long in the wet, humid riverine conditions of London Docks in hessian cloth bags, canvas bales, leaky crates, and barrels, then their quality degrades very quickly. Moreover, spices lose their potency; the essential oils evaporate, so they must be turned over and sold quickly. In the initial days, the company rented warehouse space as and when needed. When the *Ascension* returned from Sumatra in 1603 after her first voyage, a vault in the Royal Exchange Cornhill was hired to store the cargo of pepper, cloves, and cinnamon. Despite the construction of a dockyard in Blackwall in 1614, warehouses were still rented rather than owned. It was only in 1683 that the EIC first constructed and owned a warehouse to store cloth and tea. That began the EIC's journey to

own dedicated warehouses for specific commodities.<sup>163</sup> After the Battle of Plassey and the EIC's subsequent entrenchment in Bengal, thereby significantly increasing its control over the growing, purchase and shipment of spices from India, the amount of goods imported shot up and more warehouses were built, including the Leadenhall Street pepper and spice warehouse in 1771. The Commutation Act in 1784 reduced the duty on tea from 119 percent to 12.5 percent, thereby massively increasing the amount of imported tea, necessitating the construction of even more warehouses. A full complex of warehouses around New Street and Cutler Street was constructed to store goods and spices. The physical layout of the warehouses is important as the location, time, construction materials, and management all had a major influence on the pricing and sourcing of spices. Without sufficient warehousing space or too much theft or lack of safe/proper storage, spices and other goods would either spoil or sell at a loss or other unplanned uneconomic activities.

FIGURE 39 - PLAN OF EIC LONDON PROPERTIES 1806 (MAKEPEACE 2010)

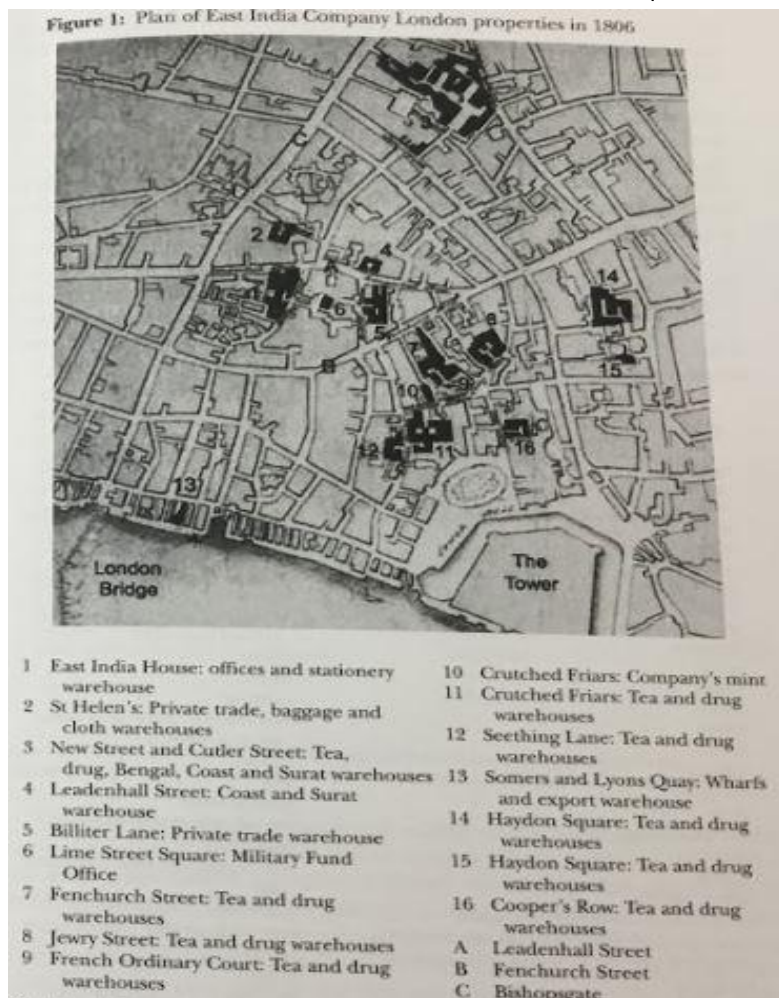


Figure 39 shows the layout of the company's warehouses in London.<sup>164</sup> It is noteworthy that spices occupy a curious place amongst other commodities. Whilst they were high value, they were also bulky, and their demand was much lower compared with other commodities such as textiles and tea. Hence, ordering and storage were difficult compared with other commodities such as saltpetre, tea and sugar. Theft and transportation challenges (from the docks to the warehouses to

<sup>163</sup> Makepeace, (2010), p17-20

<sup>164</sup> *ibid*, p21

EIC's offices for auction and return as appropriate), as can be seen from the map, were an ever-present issue. Lack of large warehouse-sized plots, conveniently located next to the river and convenient for transporting goods from the warehouse to the Leadenhall area, complicated matters for the company. Over the period of 1600-1800, the Pool of London started suffering from extreme congestion as the West Indies and North American trade developed alongside the East Indian trade. Imports from the West Indies and North American areas were bulk commodities such as rum, sugar, and cotton, which proved problematic. These commodities very quickly consumed space. Tatham gives an example from 1799, describing the official capacity of the warehouses attached to the legal quays as being 32,000 hogsheads of sugar.<sup>165</sup> Usually, the yearly imports from the West Indies were 100,000-120,000 hogsheads of sugar; one fleet from the Leeward Islands brought in 35,000 hogsheads, whilst another from Jamaica brought in 40,000 hogsheads. These valuable commodities had to be stored under cover.

“River pirates, night plunderers, light horsemen, heavy horsemen, game watermen, game lightermen, mudlarks, scuffle-hunters, copemen and a number of inferior revenue officers who joined in the game. Each of these pilferers followed his own methods, some working at night and armed, others in day-time with the aid of loose baggy clothing, some prowling in the mud at low tide, waiting for goods to be cast overboard by accomplices, yet others starting fights during unloading and seizing their booty during the general commotion.”

Colquhoun estimated that on average each company ship was losing £500 worth of goods to plunder on the Thames. A more detailed description of the EIC's response to this level of theft is provided by Huw Bowen:

“...by securing the reduction of the high import duties imposed upon Asian commodities.....improve the shipping system and refine the practices in place to facilitate the transfer of goods from vessels to its warehouses in the City of London.... collaborated more closely with the customs service and the navy.... entirely recasting the very foundations of its shipping, docking, and cargo-handling operations in London.”<sup>166</sup>

In the same article, Huw Bowen also describes the long, complicated process from the time the ships reached the shores of England:

“The customs service monitored East Indiamen closely from the time they arrived off Deal, with guard boats being posted fore and aft before vessels proceeded up the Thames from Gravesend. An item of cargo had to pass through many hands as it was carried up the Thames, first to Long Reach and then to Blackwall Reach or Deptford Pool, where it was transferred from the East Indiaman, which could proceed no further up the river, to a sealed lighter or hoy. These vessels...were taken upstream to the sixteen "Legal Quays" situated in the Pool of London between London Bridge and Billingsgate, near the heart of the City. The Company used Somer's Quay and Lyon Quay (or Botolph Wharf) ....to receive ...spices..... Goods were then unloaded and stored in quayside transit warehouses. After checks and recording at the Custom House, they were taken by cart to the appropriate Company warehouse.....”

Each of these stages allowed enormous opportunity for theft and corruption. The EIC collaborated with the King's Officers and went as far as to give them an annual gift of spices to

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<sup>165</sup> Tatham, W, (1799), p150

<sup>166</sup> Bowen, (2002)

improve relations to control this theft. The EIC finally built the East India Docks and then transported the goods and spices under guard to the warehouses in the city, but thefts and crimes still happened throughout the chain, further impacting the economics of the spice trade. The Old Bailey Online Records give a considerable number of cases relating to spice theft from either ships or warehouses, which are discussed later in this chapter.<sup>167</sup> Besides some interesting crimes relating to spices, tea, and textiles, Margaret Makepeace also provides a comprehensive overview of how the EIC's warehouses operated, although only from 1800 to 1858, when the company was at its height.<sup>168</sup> Most of the warehouse records, committee minutes and records, etc. (an estimated 300 tons of records) were destroyed after the EIC's dissolution in 1860, leaving very few warehouse records available.<sup>169</sup>

### 2.6.6. EIC Sales, Exports and Re-Export

Interestingly, both VOC and the EIC never sold directly to the end customer, preferring to deal with a wholesaler. From 1650 onwards, the EIC started to auction its goods in quarterly sales in London. Both firms learnt from the mistakes the Portuguese made, whose pepper supply to Antwerp and other European markets was very uncertain, causing the prices to fluctuate extensively, thereby affecting the breadth of the market. Customers did not purchase pepper when it was available and wanted to purchase it when it was not.<sup>170</sup> Both the VOC and the EIC learnt from the beginning that pepper supply, storage and sales had to be very carefully managed so as not to cause undue hardship brought about by major fluctuations. The Indian fleet arrived in London during autumn. The goods were stored, and a certain quantity was put up for auction. No further sales were made till the next quarterly date. With this kind of control over the supply, there was more certainty in the market and price fluctuations were controlled. The EIC judged the amount to be sold based upon history, the performance of the rival Dutch firm in importing goods and availability in Amsterdam, the cost of holding inventories, the elasticity of demand and current demand. The company published the total amount available and the prices at which bids were invited. Bidders were expected to bid for their required amounts at various price points. Given the transparency, it was an extraordinarily successful market. Despite much research, no evidence was found showing the EIC re-exported spices elsewhere to Europe or the Americas, though it re-exported significant amounts of other goods (tea to textiles). The EIC also had a large export business. Sometime after the 1750s, it stopped sending bullion to India as it was able to pay for imports with local earnings from British exports.<sup>171</sup> There were spice exports to North America as shown in Table 10, created by Smith.<sup>172</sup>

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<sup>167</sup> [https://www.oldbaileyonline.org/browse.jsp?id=t18030914-109&div=t18030914-109&terms=spice\\_warehouse#highlight](https://www.oldbaileyonline.org/browse.jsp?id=t18030914-109&div=t18030914-109&terms=spice_warehouse#highlight) accessed Sept 9, 2021

[https://www.oldbaileyonline.org/browse.jsp?id=t18131027-6&div=t18131027-6&terms=spice\\_warehouse#highlight](https://www.oldbaileyonline.org/browse.jsp?id=t18131027-6&div=t18131027-6&terms=spice_warehouse#highlight) accessed Sept 9, 2021

[https://www.oldbaileyonline.org/browse.jsp?id=t18140706-47&div=t18140706-47&terms=spice\\_warehouse#highlight](https://www.oldbaileyonline.org/browse.jsp?id=t18140706-47&div=t18140706-47&terms=spice_warehouse#highlight) accessed Sept 9, 2021

<sup>168</sup> Makepeace, (2010), p12-28, 102-04

<sup>169</sup> *ibid*, (2010), Appendix 6

<sup>170</sup> O'Rourke and Williamson, (2009)

<sup>171</sup> Bowen, (2022)

<sup>172</sup> Smith, (1995)

TABLE 10 – N. AMERICA EXPORT GOODS PRICE INDEX 1701-1770 (SMITH 1995)

Year 17....	Wool	Linen	Iron	Non-ferrous metals	Leather	Misc	Coal	Beer	Cheese	Salt	Pepper	Calicoes	Tea	Unweighted arithmetic m	%
01-10	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	00.0
11-20	86.2	101.5	100.2	94.4	104.8	102.3	88.8	104.4	84.1	83.6	139.3	114.8	104.0	100.7	14.3
21-30	83.8	95.0	102.7	98.9	108.4	108.4	87.1	107.9	90.0	75.0	100.6	92.7	99.2	96.1	10.2
31-40	79.4	97.2	106.1	94.3	111.8	105.7	91.1	108.8	80.8	75.6	98.4	88.2	91.0	94.4	11.8
41-50	77.4	104.7	101.1	91.8	111.9	107.1	97.1	109.4	86.6	78.3	90.1	109.9	78.1	95.7	12.9
51-60	78.8	104.5	95.6	91.8	114.8	108.0	107.0	109.4	90.2	75.0	88.8	106.7	60.0	94.7	16.3
61-70	79.9	106.1	96.8	88.5	117.0	116.2	97.4	97.3	96.0	71.4	95.2	100.8	44.6	92.9	19.8

There is a variable effect here for pepper exports, ranging from a low of 8.8 up to 139.3, although showing a slight declining trend. This could be because competition started to heat up as American firms using their own ships established their own supply chains directly into Asia (Southeast Asia and India).

## 2.7. Domestic Supply Chain

Roberts laid out a fascinating survey of the provenance of a variety of goods and groceries imported into England in 1638.<sup>173</sup> As Stobart mentions, spices started to come in not just from India and Southeast Asia, but also from the East Indies, such as Jamaica pepper, and then other spices were introduced to the East Indies, such as ginger and nutmeg.<sup>174</sup> The supply chain from the EIC's auctions to the end user depended upon who the end user was. Institutional buyers such as colleges, hospitals, or schools had direct wholesaler or retailer links where often multi-year contracts were signed.<sup>175</sup> For the aristocracy, there were direct links with London merchants providing a wholesale amount of these luxury goods. For example, despite the distance, the Bishop of Carlisle ordered his spices from London. Disregarding the high transport costs from London up to Durham, the cellarer of Durham Priory bought spices from London merchants and grocers.<sup>176</sup> Richard Mitford, Bishop of Salisbury, ordered much of his preserved fish, wax, jewellery, spices, dried fruits, and almonds from London. Several aristocratic families had London homes that would frequently become depots where local London purchases were stored. These were then either consumed locally or were sent by self-owned transport to the country houses and abbeys for consumption during visits.<sup>177</sup> These remote orders were paid for in cash (long distance sales were obviously not

<sup>173</sup> Roberts (1638)

<sup>174</sup> Stobart (2013), p45

<sup>175</sup> Anonymous, (1908)

<sup>176</sup> Fowler, (1898-1901), p69-72

<sup>177</sup> Dyer, (2000), p261



suited to credit sales) where we find women in Norfolk sending cash with their letters to grocers in London requesting the purchase of textiles and spices.<sup>178</sup> It should be noted that in the early modern period, work patterns clearly indicate that mainly women undertook such transactions.<sup>179</sup> They were quite mindful of the price differentials between local and London merchants, frequently comparing the prices and then ordering from London.<sup>180</sup> Miss Margaret Paston, a member of a wealthy family in Norwich, wrote to a friend in London: “send me word what price a pound of pepper, cloves, mace, ginger, almonds, rice, galangal, saffron, raisins of Corinth, greyns, and comfits, of each of these send me the price of a pound, and if it be better cheap at London than it is here, I will send you money to buy with such as I will have.”<sup>181</sup>

London grocers also supplied regional town shops, fairs and markets with spices and dyestuffs.<sup>182</sup> The urban professional or middle class frequented the urban shops, whilst the rural consumers frequented the village shop. There was a vast array of shops in the later Medieval period up to the Sixteenth-Seventeenth century in England, some with live-in quarters, some below official buildings like toll booths and some standalone, as the below example in Table 11 shows, whilst others would be part of a whole market street.<sup>183</sup>

TABLE 11 - ENGLISH PROVINCIAL SHOPS INVENTORY 1588-1777 (GERRARD & GUTIERREZ 2018)

	Shopkeepers				
	Wray, Ripon, Yorks, 1588-98	Webb, Stafford, Staffs. 1738-44	Dickenson, Worcester, Worcs. 1740-7	Anon. Ely, Cambs, 1750	Dent, Kirby Stephen, Cumbria 1756-77
Type of stock	Cloth, provisions, groceries, haberdashery	Cloth, haberdashery	Groceries, provisions, stationery	Groceries, provisions, cloth, haberdashery, stationery	Groceries, provisions, cloth, haberdashery, stationery
Suppliers					
No. of suppliers	21	30	37	30	185
% From London	0	40	32	70	6
% From outports	0	0	46	0	20
% From large market towns	14	50	16	23	44
% From small market towns	72	10	5	7	22
% From villages	14	0	0	0	7
% From home county or adjacent country	90	23	24	20	81
% Giving credit > 3 months	55	n/a	78	88	n/a

Table 11 indicates where these provincial shops sourced their supplies. Broadly, the supplies came from small market towns, but it would be expected that luxuries such as spices were sourced

<sup>178</sup> *ibid*, p276

<sup>179</sup> Whittle and Hailwood, (2018)

<sup>180</sup> Rees, (1910), p54

<sup>181</sup> Ingram, (2019)

<sup>182</sup> Nightingale, (1995), p19

<sup>183</sup> Gerrard and Gutierrez, (2018), p312-23

from London. A substantial proportion of the shops offered credit.<sup>184</sup> In terms of provincial shops in the larger towns, Stobart reports that on average, up to nineteen varieties of spice were stocked by 82.4 percent of grocery retailers from 1660-1830, with a mean of 3.8 spices per shop. He mentions various inventory/probate records for provincial grocers. Lawrence Newall of Rochdale listed in his 1649 inventory, amongst other things, 2 lbs 14 oz of long pepper and 4 lbs of grains. The 1598 inventory of Thomas Finnies, a Coventry grocer, listed ten different spices, four kinds of dried fruit, four different dyestuffs, three grades of sugar, etc. Peter Harris, in the same decade, sold pepper, mace, nutmeg, cloves, ginger, turmeric, liquorice, sugar candy and loaves, etc. in Warwickshire.<sup>185</sup> John Atkins of Kenilworth in 1730 had Jamaica pepper, black pepper, raw ginger, powder ginger, mace, cinnamon, cloves, rice, and nutmeg in his inventory, whilst Grocer Alexander Chorley of Manchester in 1723 had a much wider variety of spices ranging from nutmeg, cloves, mace, cinnamon, clove pepper, black pepper, long pepper, liquorice, ground ginger, white ginger, raw ginger, saffron, senna, bay berries, gauls, diapente, ormseed, aloes, aniseed, caraway, fennel, fenugreek and rice, besides a huge range of other food items. Stobard also mentions that Thomas Dickenson, a grocer from Worcester, from 1741-1742 sold spices to customers with one out of ten purchases involving a spice.<sup>186</sup>

TABLE 12 - STOCK HELD BY VILLAGE SHOPS, 1660-1760 (STOBART AND BAILEY 2017)

	1660-90(n=24)		1691-1720(n=17)		1721-75(n=17)	
	N	%	N	%	N	%
Groceries:						
Sugar	21	88	14	82	13	76
Tobacco	11	46	13	76	13	76
Fruit	12	50	8	47	7	41
Spices	14	58	13	76	11	65
Alcohol	5	21	7	41	4	24
Tea/ coffee	0	0	1	6	6	35
Other/ unspecified	19	79	15	88	13	76
Haberdashery:						
Ribbon/thread	18	75	17	100	14	82
Buttons	7	29	13	76	7	41
Other/ unspecified	11	46	7	41	7	41
Clothing	10	42	11	65	8	47
Textiles:						

<sup>184</sup> Shammas, (2008), p241

<sup>185</sup> Stobart, (2013), p26

<sup>186</sup> ibid, p197

	1660-90(n=24)		1691-1720(n=17)		1721-75(n=17)	
	N	%	N	%	N	%
Woollen	13	54	10	59	10	59
Linen	16	67	11	65	10	59
Cotton/silk	8	33	6	35	4	24
Hardware:						
Metal	11	46	11	65	8	47
Candles/wax	8	33	8	47	9	53
Soap/starch	14	58	9	53	6	35
Books/paper	4	17	4	24	7	41
Others	14	58	12	71	11	65
Mean no. of lines	9		11		10	

Table 12 shows Stobart and Bailey's inventory of stock held in village shops in Cheshire, which clearly indicates that the ultimate retail outlet for the consumer stocked spices. It was not just one or two shops, but most shops that stocked spices.<sup>187</sup> These were shops in rural settlements ranging from small hamlets to significant villages, but crucially these conurbations lacked a market where spices and other groceries could be purchased. Mainly taken from probate inventories, the supply chain for spices reached deep into the rural heartlands where villagers, agricultural labourers and to a lesser extent, servants of the manor conducted their own shopping. As a detailed example of inventory, Stobart and Bailey talk about Ralph Edge, an ironmonger from Tarporley in Cheshire in 1683, who had stock worth £248 7s. 9½d., including spices. Besides the usual daily requirements supplied by a mini "department store" in the village, luxuries such as spices, tea/coffee and sugar were also provided. The final link in the chain was the pedlar, who visited villages to barter or sell his wares. The travelling pedlar, the chapman (as he was known before), was also called a mercer. Pedlars dealt with miscellaneous goods of all kinds, ranging from toys, trinkets, spices, drugs, and small commodities, which were easy for a single person to carry and of relatively high value, rather than bulk goods such as silks and textiles.<sup>188</sup>

## 2.8. Demand and Consumption in the UK

Consumption figures are more difficult to determine, as there are no consolidated statistics available; hence it is necessary to rely on certain data points. The first example is from the port books from Bristol, where exports to Ireland were shipped, as reported by Flavin (2010). It should be considered that the VOC and the EIC had huge numbers of ships (in the high hundreds in

<sup>187</sup> Stobart and Bailey (2017), p1-25

<sup>188</sup> Rees, (1910), p5-7

the case of the VOC and low hundreds for the EIC, annually), whilst the number of ships transiting from Bristol was in the low tens.

As Flavin shows the gross value of saffron exported from Bristol to Ireland was extraordinarily high, solely due to the very high value of saffron but the volume was tiny.<sup>189</sup> This is an indication of the very high value/volume ratio of this very expensive spice. Flavin suggests that the drop-off in the value, as well as the trade volume towards the end of the period, could be due to the availability of alternatives to saffron as a colourant, such as yellow ochre. Another factor could be the availability of turmeric, which started to be imported from India around this time on the Portuguese ships. However, the Bristol data or Irish record do not suggest that turmeric was imported. In terms of domestic demand by the common agricultural worker. Shakespeare's *Winter's Tale*, first published in 1623, talks about the shepherd's son deciding what to buy for the shearing feast: *"I cannot do't without counters. Let me see; what am I to buy for our sheep-shearing feast? Three pound of sugar, five pound of currants, rice,—what will this sister of mine do with rice?.....I must have saffron to colour the warden (pears) pies; mace; dates?—none, that's out of my note; nutmegs, seven; a race (root) or two of ginger, but that I may beg; four pound of prunes, and as many of raisins o' the sun."*<sup>190</sup> As a sheep cost 1s 5d, by comparison, pepper cost 1s 4d per lb, mace 8s, cloves 8s, sugar 4 1/2d, currants 2d, prunes 1 1/2 d, and ginger 4s per lb; hence pepper cost a pretty penny indeed.<sup>191</sup>

The amounts need to be in context. This quote from Shakespeare relates to a common agricultural worker whose use of spices and other expensive items was extremely rare. In this case, it was hardly more than once or twice a year, around special festivals (like shearing or religious feasts and holidays). Individual households in England could, proportionally, be using a higher volume of spices than the entire amount imported into Ireland. For example, Dawson reports that Willoughby's single household in Nottingham and Warwickshire during the sixteenth century consumed 37 lb 8 oz. of pepper.<sup>192</sup> Compare this with the highest amount imported into Ireland in 1563: 108.5 lbs! Stobart analyses the Leigh family's (Stoneleigh Abbey in Warwickshire) records of grocery purchases over a 160-year period from fifty-two grocers ordering 129 different goods. Seven varieties of spice were purchased in half the bills in 1630-81, ten varieties in half the bills during the period 1710-1738 and fourteen varieties in 30 percent of the bills during 1768-1792. Grace Nettleton's household accounts for Sir Francis Leicester in Cheshire show fewer spices were ordered, and then only in small quantities: 8d of cinnamon, 16d (8oz) of pepper, 1s 8d of mace and 1s 6d of nutmeg (15th April & 26th May (1721)).<sup>193</sup>

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<sup>189</sup> Flavin (2010)

<sup>190</sup> Shahani, (2014)

<sup>191</sup> Stobart, (2013), p25

<sup>192</sup> Dawson, (2009), p220

<sup>193</sup> Stobart, (2013), p193

FIGURE 40 - THE ANNUAL INCOME AND EXPENSE OF THE NATION, 1688 (KING 1688)

§ VI.—THE Annual INCOME, and EXPENCE, of the Nation, as it stood Anno 1688.

THAT the yearly INCOME of the Nation, Anno 1688, was - - - - -	} £.43,500,000 Sterling.
That the yearly expence of the nation was -	41,700,000
That then the yearly increafe of wealth was -	1,800,000.
That the yearly RENT of the lands was about	10,000,000
Of the burgage, or houfeing, about - - -	2,000,000
Of all other hereditaments, about - - -	1,000,000
In all	13,000,000.
That the yearly PRODUCE of trade, arts, and labours, was about - - - - -	} 30,500,000
In all	43,500,000.
That the number of inhabited houfes being about	1,300,000,
the number of families about - - - - -	1,360,000,
and the number of people about - - - - -	5,500,000;—
The PEOPLE answer to $4\frac{1}{4}$ per houfe, and 4 per family.	
That the Yearly Eftates, or Income, of the feveral families, answer,	
In common, to about - - - - -	£.32. 0. 0. per Family.
And about - - - - -	7. 18. 0. per Head.
That the yearly expence of the nation is about	7. 11. 4. per Head.
And the yearly increafe about - - - - -	0. 6 8. per Head.
That the whole value of the kingdom, in general, is about - - - - -	} £.650,000,000 Sterling.
Viz. The 13 millions of yearly rents, at about 18 years purchafe - - - - -	} 234,000,000 Sterling.
The 30 millions and a half per annum, by trade, arts, labours, &c. at near 11 years purchafe, (which, being the value of the 5 millions and a half of people, at £. 60 per head), comes to - - - - -	} 330,000,000.
The flock of the kingdom, in money, plate, jewels, and houfehold goods, about -	} 28,000,000.
The flock of the kingdom, in fhipping, forts, ammunition, ftores, foreign or home goods, wares, and provifions for trade abroad, or confumption at home, and all inftruments and materials relating thereto - - -	} 33,000,000.
The live flock of the kingdom, in cattle, beafts, fowl, &c. - - - - -	} 25,000,000.
In all	£.650,000,000 Sterling.

The second way to review spice consumption is to see spice usage in the overall economic structure of England. Based upon the dataset compiled by Gregory King in 1688, there is some mention of saffron usage on a national basis.<sup>194</sup> Gregory King (Figure 40 above shows the national account table for 1688 AD) estimated that the total value of peas, beans and other vetches was £1.48 million (inclusive of non-food crops such as hemp, flax, woad, saffron) and out of this, the value of saffron was £100,000. Grains were £8.275 million. This equates to 1.21 percent of the total value of food crops or 6.75 percent of the non-food value. Quite a high amount for “just” a spice- which is supposed to be expensive and used sparingly.<sup>195</sup>

Spices were not just used for food, as the household ledgers show, but were also used in medicines-either on their own or as ingredients. It is difficult to estimate the amounts, but an indirect way to check the relative importance of spices and their usage can be through looking at the statistical review of the jars used to store medicines in various apothecary shops, comprising 1207

<sup>194</sup> Dodgson, (2013)

<sup>195</sup> Chalmers, (1810), p423

jars from the collections of the Wellcome Trust, now held by the National Science Museum (730 jars), the Thackray Museum in Leeds (444 jars), and the Royal College of Surgeons. This analysis shows that there were seven jars labelled saffron. Other elements such as rose, poppy, theriac, orange, violets, elder are noted.<sup>196</sup> Theriac contained several spices.<sup>197</sup> Given the abundant quantity of medicines containing spices, either discreetly or as an ingredient, spice consumption for medicinal purposes was quite high. This area is explored further in the chapter on spices and medicine. Thorold Rogers, in *A History of Agriculture and Prices in England*, explored the price behaviour of various agricultural commodities.<sup>198</sup> The annual data is extremely patchy and would take up too much space to show; additionally, graphing does not reveal any patterns, again because of the data gaps. Rogers collected most of his data from various collections: Merton College, Queens College, New College in Oxford, and the Public Records Office. The Public Records Office has records from the proceeds of estates administered in the Court of Wards, some from accounts of monastic estates and others held by the Queen or King. Rogers provided decadal data, which is provided in Table 23 below:

TABLE 13 - SPICE DATA FROM ROGERS DATASET (ROGERS 1887)

Decade	pepper lb	sugar lb	ginger lb	saffron lb	cloves lb	mace lb	cinnamon	Nutmeg lb
1259-1270	£ 0.0469	£ 0.0688	£ 0.0896	£ 0.6500				
1271-1280	£ 0.0500							
1281-1290	£ 0.0406	£ 0.0385		£ 0.2708				
1291-1300	£ 0.0656	£ 0.0833		£ 0.3000				
1301-1310	£ 0.0521	£ 0.0521		£ 0.2500				
1311-1320	£ 0.0458			£ 0.2083				
1321-1330	£ 0.0646	£ 0.0583	£ 0.0635	£ 0.2500				
1331-1340	£ 0.0635	£ 0.0458	£ 0.0667	£ 0.2115				
1341-1350	£ 0.0781	£ 0.0583	£ 0.0885	£ 0.7500				
1351-1360	£ 0.1031		£ 0.0667					
1361-1370	£ 0.0729							
1371-1380	£ 0.0750	£ 0.0875	£ 0.0750	£ 0.7833				
1381-1390	£ 0.0479	£ 0.0729	£ 0.0708	£ 0.5958				
1399-1400	£ 0.0500	£ 0.0771	£ 0.1125	£ 0.7958				
1401-1410	£ 0.6125	£ 1.2000	£ 0.0896	£ 0.6625	£ 0.1458			
1411-1420	£ 1.6063		£ 0.1083	£ 0.6208	£ 0.1667	£ 0.2500		
1421-1430	£ 0.8177			£ 0.5917	£ 0.1573	£ 0.2000		
1431-1440	£ 0.6750	£ 1.2000	£ 0.1167	£ 0.7104	£ 0.1688	£ 0.1667		
1441-1450	£ 0.4740	£ 1.2000	£ 0.0500	£ 0.5885	£ 0.2313	£ 0.1604	£ 0.1000	
1451-1460	£ 0.6500	£ 0.7125	£ 0.1083	£ 0.4990	£ 0.1531	£ 0.1542	£ 0.0667	
1461-1470	£ 0.6844	£ 0.7417	£ 0.0625	£ 0.5167	£ 0.1563	£ 0.1438	£ 0.1000	
1471-1480	£ 0.7125	£ 0.4333	£ 0.1000	£ 0.6292	£ 0.1375	£ 0.1552	£ 0.1896	
1481-1490	£ 0.8573	£ 0.3250	£ 0.0896	£ 0.5865	£ 0.1292	£ 0.1625	£ 0.1563	
1491-1500	£ 0.8531	£ 0.2146	£ 0.1156	£ 0.5073	£ 0.2146	£ 0.1792	£ 0.1833	
1501-1510	£ 0.8083	£ 0.1594	£ 0.0729	£ 0.4344	£ 0.2500	£ 0.2313	£ 0.1719	
1511-1520	£ 0.8146	£ 0.3104	£ 0.1104	£ 0.5063	£ 0.3635	£ 0.2469	£ 0.1417	
1521-1530	£ 1.1458	£ 0.3385	£ 0.1490	£ 0.6688	£ 0.3969	£ 0.3104	£ 0.1630	
1531-1540	£ 1.1698	£ 0.3667	£ 0.1313	£ 0.8646	£ 0.3354	£ 0.4375	£ 0.2396	
1541-1550	£ 1.0063	£ 0.5510	£ 0.1333	£ 0.5552	£ 0.2458	£ 0.4594	£ 0.2885	
1551-1560	£ 1.5854	£ 0.6958	£ 0.2083	£ 0.9344	£ 0.2708	£ 0.2458	£ 0.2833	
1561-1570	£ 2.2250	£ 0.4708	£ 0.2500	£ 0.9167	£ 0.4292	£ 0.6771	£ 0.2958	
1571-1580	£ 1.6875	£ 0.8615	£ 0.1250	£ 0.9000	£ 0.6167	£ 0.6500	£ 0.3500	
1581-1590	£ 2.2563	£ 0.6656	£ 0.0990		£ 0.2292	£ 0.5500	£ 0.3000	
1591-1600	£ 2.3208	£ 0.7531	£ 0.1375		£ 0.4000	£ 0.5375	£ 0.3625	£ 0.3250
1601-1610	£ 1.4104	£ 0.6833	£ 0.0708		£ 0.3063		£ 0.2500	£ 0.2792
1611-1620	£ 1.3438	£ 0.6313	£ 0.0740		£ 0.3708	£ 1.3500	£ 0.2458	£ 0.2219
1621-1630	£ 1.1396	£ 0.6552	£ 0.0667		£ 0.4500	£ 0.3896	£ 0.2000	£ 0.2042
1631-1640	£ 1.2167	£ 0.8000	£ 0.0750		£ 0.5281	£ 0.4583	£ 0.1708	£ 0.2510
1641-1650		£ 0.7177				£ 0.5885	£ 0.2500	£ 0.2406
1651-1660	£ 1.0167	£ 0.4250			£ 0.4167		£ 0.4000	
1661-1670		£ 0.4500	£ 0.0500		£ 0.6000	£ 0.8229	£ 0.2333	£ 0.3125
1671-1680							£ 0.4000	£ 0.2250
1681-1690	£ 1.4458	£ 0.3375			£ 0.5000			
1691-1700		£ 0.3583	£ 0.0313		£ 0.4094		£ 0.4115	£ 0.4042

<sup>196</sup> Wallis, (2008)

<sup>197</sup> Griffin, J P, (2004)

<sup>198</sup> Rogers, (1887)

Rogers also provides commentary on the spices based upon each of the time periods in his various volumes. For example, in Volume 1 covering the period 1259-1400, he introduces the prices and sources of common spices:

- The price of pepper varies little up to the occurrence of the plague. It is found occasionally at low prices, as generally stated between 1281-1290. But overall, it will be found to stand at about 1s the pound...The average, 1s 1 1/2 d before and 1s 4 3/4 d after the plague is very high, and this condiment must have been used sparingly.
- Cloves. These aromatic buds are occasionally mentioned, twelve entries being found .... Apart from saffron, it is overall the costliest of the several spices. Its price fluctuates exceedingly. It is found as high as £1 1s. 4d. the pound at Oxford in 1329 and as low as 3s. 4d. at Bicester seventy years afterwards... the supply of this spice was exceedingly uncertain, or that its quality varied very considerably.
- Ginger. After pepper, this is the commonest of the spices. Its origin, according to the list of spices found in Sanuto, was the East and it was carried both by the Red Sea and by the overland passage...The dearest entries of whole ginger are in 1344 and in 1391, when it is bought in Oxford at 2s 8d., and in London at 2s. 10d...The spices were purchased, in London, by one Segrave, to furnish a great feast at Elham in Kent.<sup>199</sup>

Similar explanations are available in each of the volumes. Once the data is shown graphically, some interesting patterns emerge.

FIGURE 41 - RETAIL PRICES OF SPICES AS PER ROGERS DATASET (ROGERS 1887)

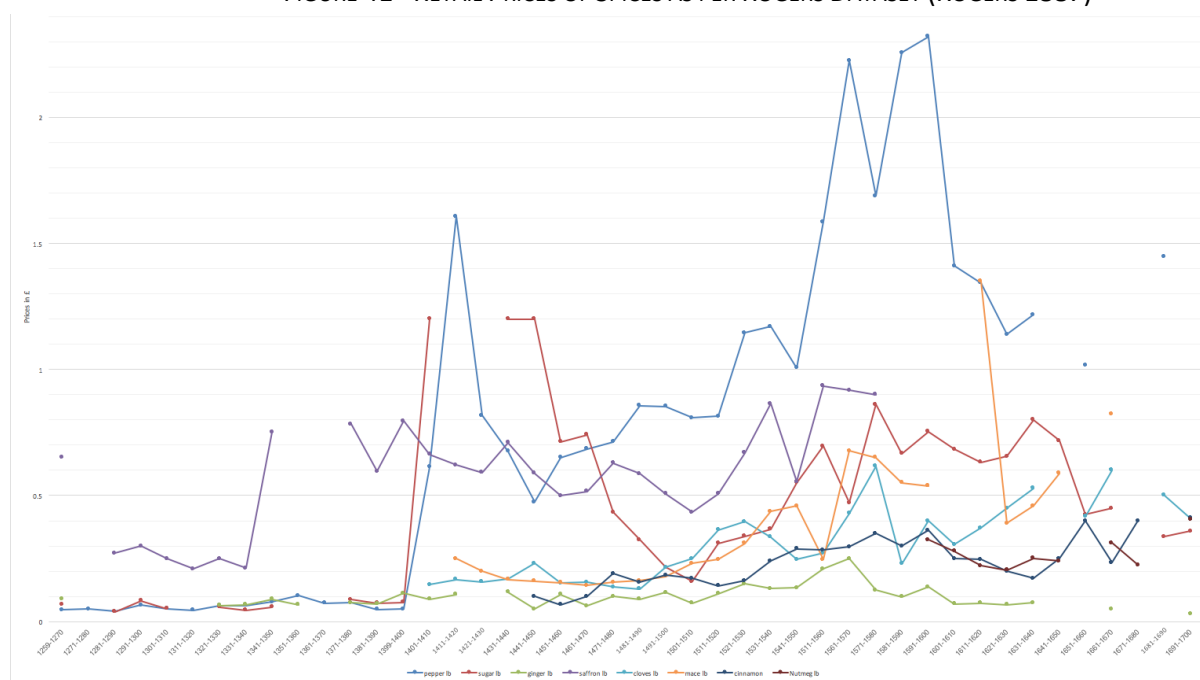


Figure 41 shows as the first pattern the lack of volatility and lower amounts compared to the volatility of the wholesale prices presented in the previous sections. The wholesale price volatility for

<sup>199</sup> ibid, vol. 1, p627-32

VOC and EIC data series was several orders of magnitude higher, whilst when considering the retail price, the prices are comparatively less volatile.

The second pattern is how the prices remained flat over prolonged periods. The prices reflect how the extreme values were smoothed out over the decade-averaging process. Despite this smoothing, it is curious to note the flatlining of the prices over several decades. Either economic activity was exceptionally low over several decades, or the demand was exceptionally low and consistent, which caused the prices to remain constant over this period. The spike in prices around the 1520 period is attributed by Rogers to Selim I's conquest of Egypt.<sup>200</sup> This severely disrupted the land route of spices into the Mediterranean and onwards to Europe. The volatility of prices increases once the sea routes open in the sixteenth and seventeenth centuries, but curiously, the prices then fall towards the end of the eighteenth century. This could be due to serious supply shocks, as large quantities were transported simultaneously to London and Amsterdam (some via Lisbon). To investigate the stability of prices, the answer lies in the law of the Assize of Bread and Ale, a thirteenth-century law in England regulating the price, weight and quality of bread and beer, baked, brewed, and sold in England.<sup>201</sup> This was the first law in English history to regulate the production and sale of goods. The law connected the production of wheat to the price of bread. If the production fell, the price of wheat rose. Hence, the price of bread was always the same, even though the wheat price fluctuated. When the price of wheat increased, the weight of bread was reduced. Images of a publication showing the various relations between wheat and bread prices are given below.<sup>202</sup> The assize of bread was in force till the beginning of the nineteenth century.

Given this accepted way of the valuation of agricultural and food-related goods, the fact that prices were stable is understandable. While it was not possible to find any evidence that spices were subject to such assizes, it could be possible that this mechanism extended to all agricultural and food-related commodities in an analogous way. Spices were the result of an underlying agricultural process (in the case of saffron, it was the plucking of the stamens from the flower and drying them), hence the prices remained stable for a significant period. It is noteworthy that fixing prices like this immediately gives rise to arbitrage. In other words, where production costs were lower (for example, where wheat and other grains were cheaper to grow, firewood availability, and streams to power mills), the profit margins were higher for bread and ale. This means that agricultural goods were shipped in from places where profit margins were lower. This in turn caused local supply issues (lower supply in places of origin and greater supply in higher-margin places). This kind of price control continued. For example, James I issued a proclamation relating to spice garbling (sifting and cleaning) and other related items that insisted that spices were all high quality and of the right prices as shown in Figure 42.<sup>203</sup>

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<sup>200</sup> *ibid*, vol. 1, p656-57

<sup>201</sup> Ross, (1956)

<sup>202</sup> Powel, (1632), p54

<sup>203</sup> Anonymous, (1622)



FIGURE 42 - JAMES I - PROCLAMATION FOR GARBLING OF SPICES 1622

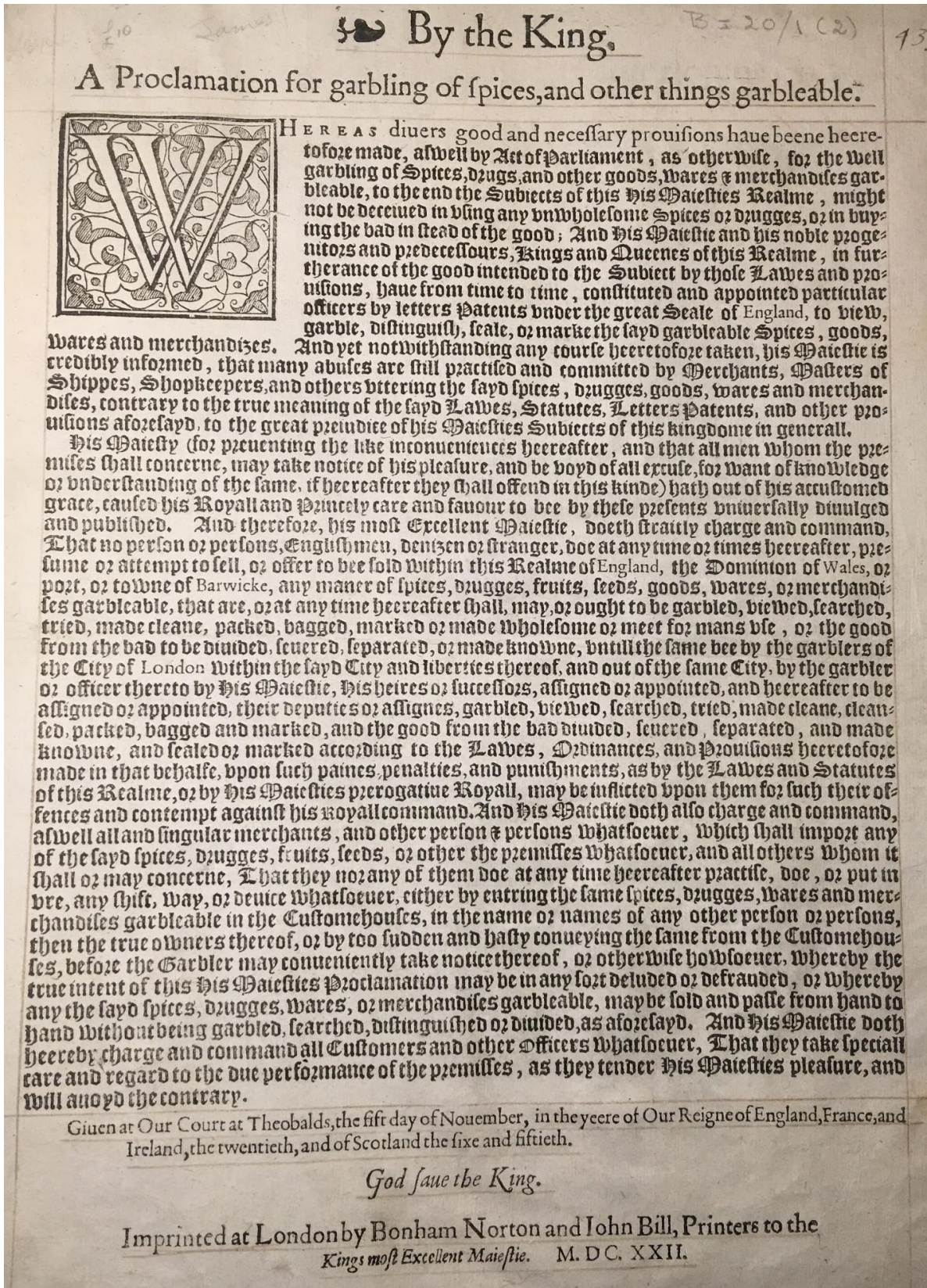
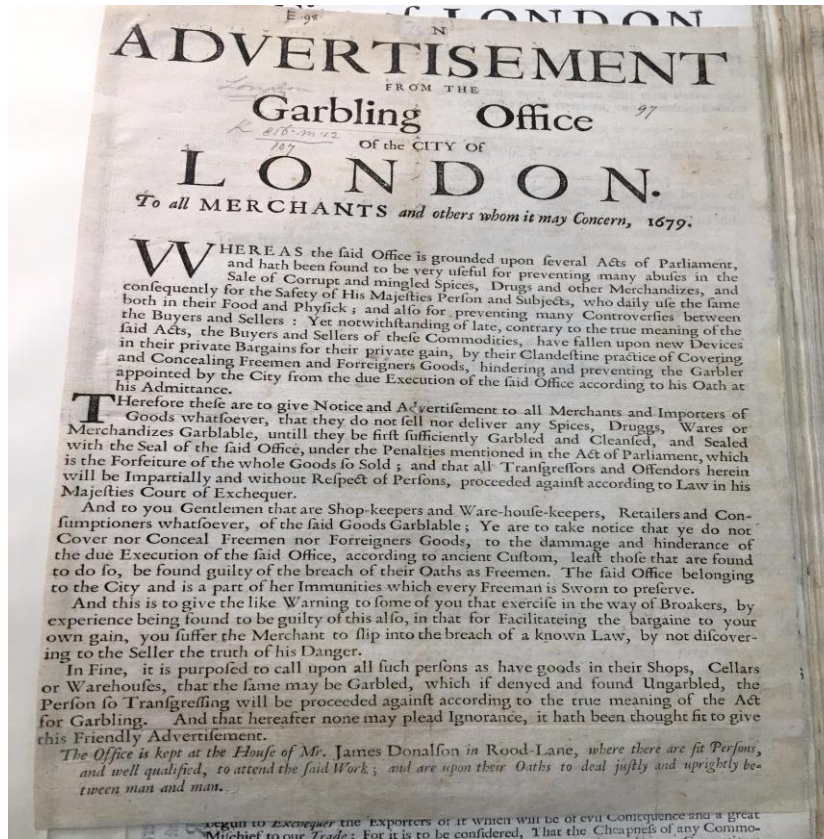




FIGURE 43 - ADVERTISEMENT FROM THE GARBLING OFFICE - 1678



This was followed by a notice, shown in Figure 43 that was issued in 1679,<sup>204</sup> with a fixed rate table, shown in Figure 44.<sup>205</sup>

FIGURE 44 - TABLE OF RATES FOR GARBLING, 1679

A TABLE of Rates for Garbling, 1679.	
<p><b>P</b>epper, 2 s. per Bag.  White Pepper, 12 d. per C.  Cloves, at 2 d. per Lib.  Nutmegs, at 3 s. 6 d. per 100 L.  Cinamon, at 2 s. 8 d. per 100 L.  Mace, at 4 s. per 100 L.  Cassia Lignum, at 2 s. 8 d. per C.  Ginger, at 12 d. per C.  Wormseeds, at 2 d. per L.  Aniseeds, at 8 d. per C.  Cumin-seeds, at 8 d. per C.  Coriander-seeds, at 8 d. per C.  Caraway-seeds, at 8 d. per C.  Almonds, at 8 d. per C.  Rice, at 8 d. per C.  Dates, at 12 d. per C.  Galls, at 8 d. per C.  Cochencil, at 1 d. per L.  Indico, at 6 d. per C.  Turmeric, at 16 d. per C.  Sena, at 4 s. per C.  Cocoa Nuts, at 12 d. per C.  Coffee, at 12 d. per C.</p>	<p>Pemento, at 12 d. per C.  Bay-berries, at 8 d. per C.  Ireos, at 12 d. per C.  Onion-seed, at 8 d. per C.  French Barley, at 8 d. per C.  Argal, at 8 d. per C.  Long Pepper, at 12 d. per C.  Spignal, at 8 d. per C.  Galingal, at 8 d. per C.  Setwell, at 8 d. per C.  Guinney Pepper, at 12 d. per C.  Stavefaker, at 12 d. per C.  Calamus, at 12 d. per C.  Fenugreek, at 8 d. per C.  Graines, at 8 d. per C.  Mastich, at 8 d. per C.  Gum-Arabick, at 12 d. per C.  Scammony, at 8 d. per C.  Olibanum, at 12 d. per C.  Hermodactyls, at 8 d. per C.  Gum-lack, at 12 d. per C.  Sal-armoniack, at 8 d. per C.</p>

Another complication to be noted whilst evaluating prices, especially in the fourteenth century and later, is that the weight of the currency and the common weight were the same:

<sup>204</sup> Anonymous, (1679a)

<sup>205</sup> Anonymous, (1679b)

“It must be remembered that, during the reigns of the first Anglo-Norman kings of England, the pound in money was precisely the pound-weight of silver, and the penny in money was the pennyweight of silver (the only coin then current in the Kingdom). At this period, weights were therefore usually expressed in pounds, shillings, and pence, but they were estimated by the ‘Saxon’ or ‘Tower’ pound, which was less than the pound troy in the proportion of 15 to 16. For instance, when the quarter of wheat was sold for 12d., the farthing loaf of Wastel was to weigh E6. l 6s., which would correspond to 6-8 lb. troy (= 5.6 lb avoirdupois). Under the same conditions, the farthing loaf of Small Cocket would weigh two shillings more than the farthing loaf of Wastel, i.e., k6. 18s. or 6.9 lb. troy (= 5\*68435 lb. avoirdupois). The scribe of the Oak Book has worked out, not without making several blunders, the weight of the farthing, halfpenny, and penny loaf of each of the kinds of bread for prices of corn from 12d. to 12s”.<sup>206</sup>

One crucial element to be noted here is the issue of the weights. All spices other than saffron were weighed in lb avoirdupois except saffron, which was priced by the lb troy. The main reason for using the troy ounce for saffron was because the troy ounce historically was only used for precious items such as gold. The troy ounce equals 31.1034 grams exactly (or about 1.0971 oz. avoirdupois). There are twelve troy ounces per troy pound, rather than the sixteen ounces per pound found in the more common avoirdupois system. This definition is recent and changed over the centuries. The avoirdupois pound has 7,000 grains, whereas the troy pound has only 5,760 grains (i.e., 12 × 480 grains). Therefore, the troy ounce is 480 grains (31.10 g), compared to the avoirdupois ounce, which is 437.5 grains (28.35 g). Hence, the troy ounce is about 10 percent heavier (ratio 192/175) than the avoirdupois ounce. The troy ounce was used variously on the continent from about 1000 AD and in England from around 1200 AD. The English troy ounce was formally adopted for English coinage in 1527.

William Henry Beveridge extended and widened the scope of the Rogers dataset to include more data.<sup>207</sup> The Beveridge data was then superseded by the Gregory Clark dataset given below. However, some elements are most interesting. Beveridge extricated data from individual institutions-four public schools, three hospitals and four government departments. Out of these, only three have records showing spice purchases. This allows us to compare what each institution paid for the spice for each common year on record. The three institutions are the Westminster School,<sup>208</sup> which is one of the oldest independent schools; Lord Steward's Department<sup>209</sup>, which is the principal office of the royal household below stairs and is responsible for several functions in Parliament; and the Navy Victualling Department which was responsible for victualling ships of the British Royal Navy with food, drink, and supplies.<sup>210</sup> The Navy Victualling Department placed orders in London and Plymouth. The data is given in shillings per lb for cinnamon, cloves, nutmeg, mace; shillings per oz for saffron; shillings per gallon for mustard and shillings per dozen lbs for tamarind. The hypothesis is that the prices are similar (not identical) for that year. Retail prices are notoriously difficult to compare, especially when it comes to institutional purchases. Institutions frequently order goods on multi-year contracts with special conditions around pricing, quality, delivery amounts, and quantity. Hence, it is not surprising to see some variations between the series over

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<sup>206</sup> Ross, (1956)

<sup>207</sup> William Henry Beveridge (1965)

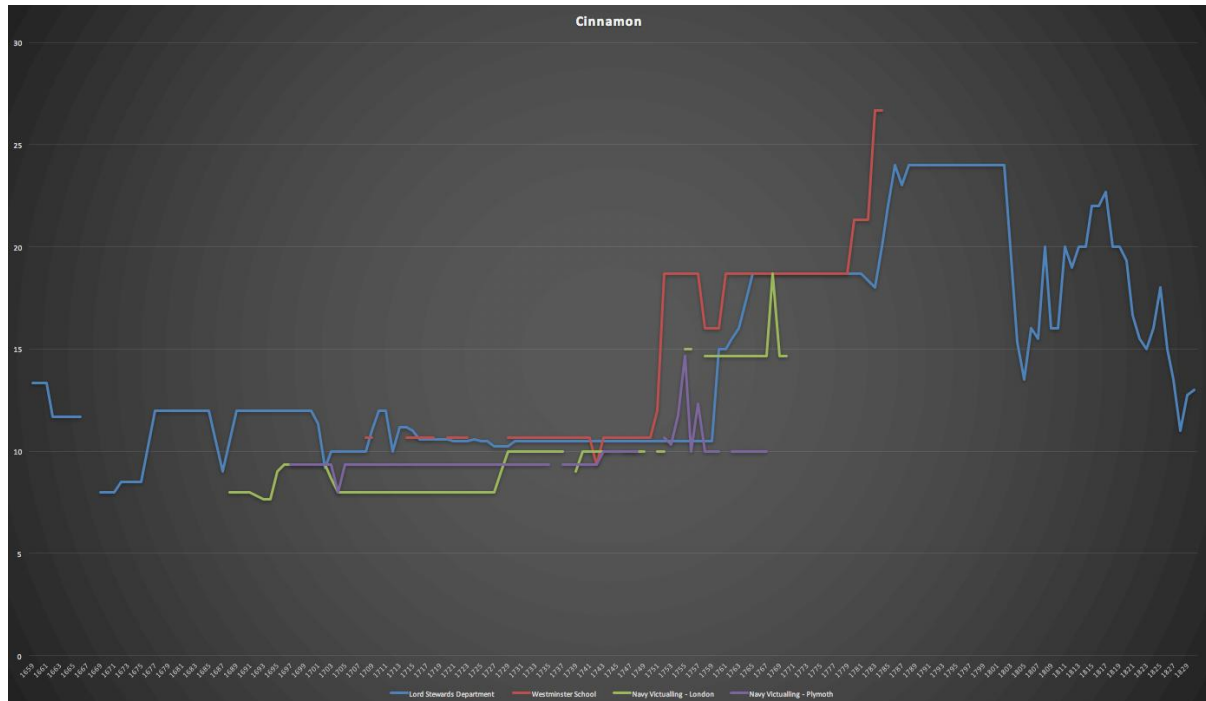
<sup>208</sup> Tanner, (1951)

<sup>209</sup> Great Britain Public Record Office, (1982)

<sup>210</sup> Rodgers, (1997), p34-35

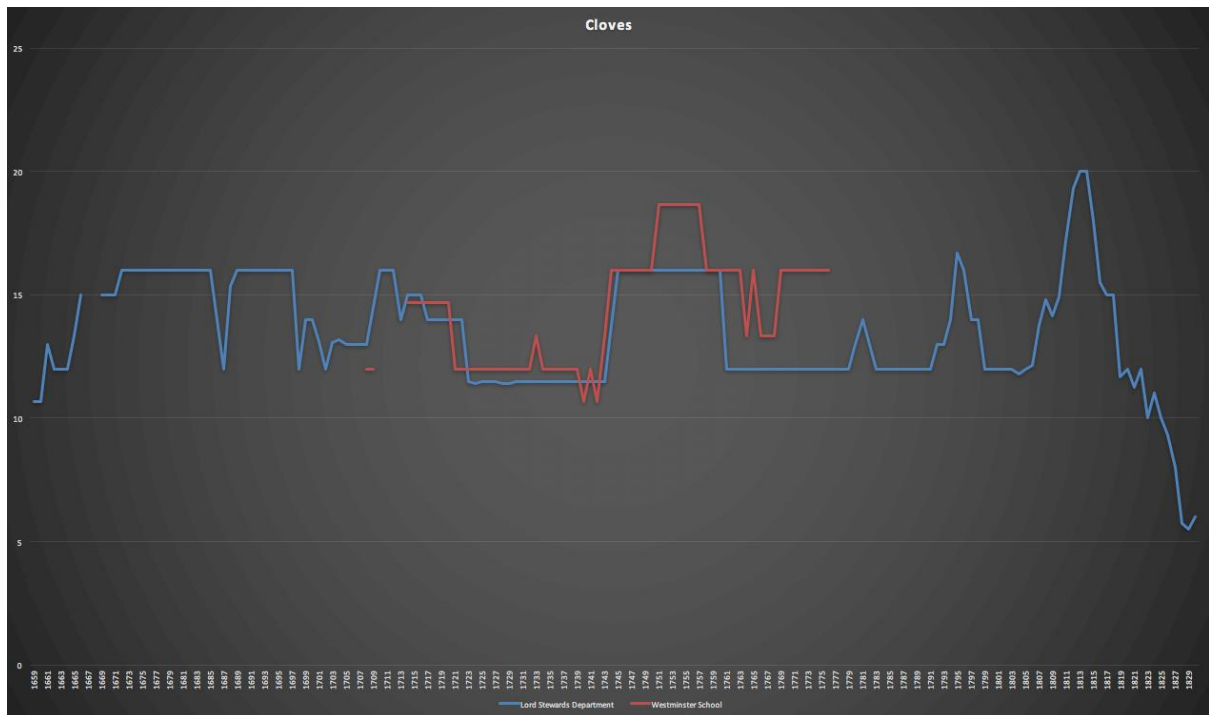
time. Moreover, there are plenty of opportunities for theft and corruption in these institutional orders, so those can be different. However, we should not see major differences. Also, noteworthy is that not every institution has records for all spices; hence, comparisons are limited.

FIGURE 45 - CINNAMON (BEVERIDGE 1965)



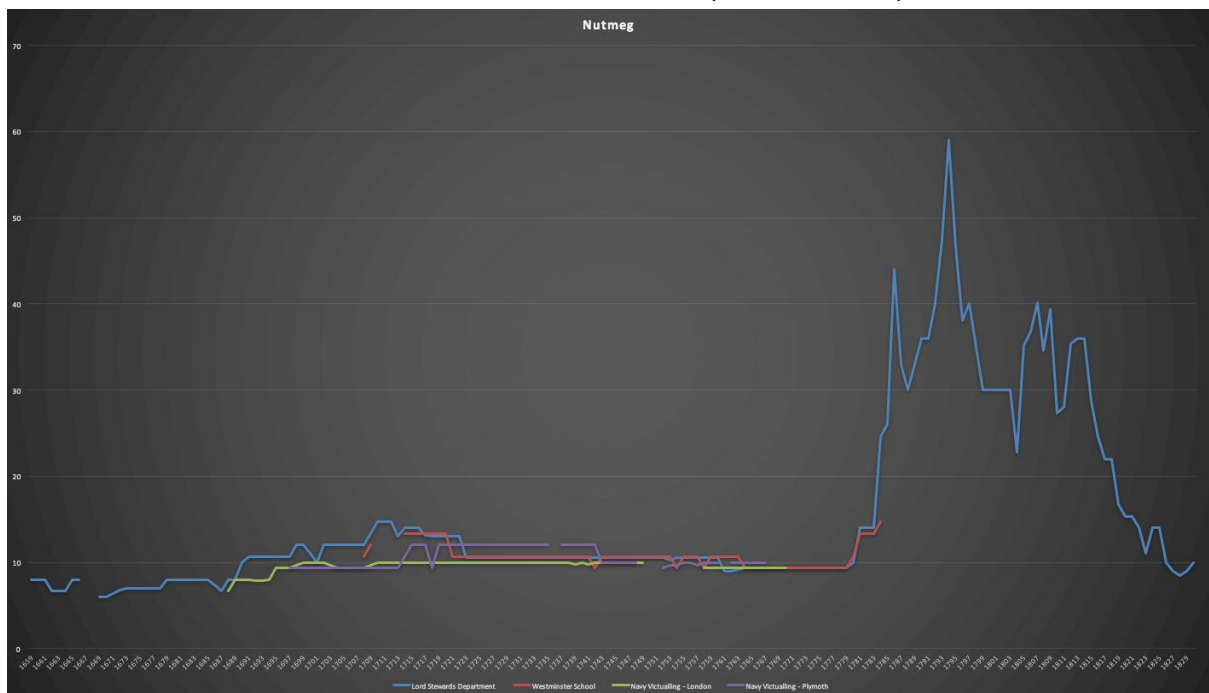
The cinnamon data in Figure 45 shows similar movement. The school data usually shows a higher price, and this could be because it would normally order smaller amounts compared to the other institutions and thus would be charged higher prices for smaller amounts. The Navy Victualling in London, normally ordering the most, has correspondingly lower prices across the board. Plymouth orders are higher, but also in some cases lower and explanations are not clearly identifiable, although corruption could indeed be one. The Lord Steward's department shows inconsistent behaviour which could be because the Lord Steward was appointed, causing a regular change in buying behaviour through replacement of buyers and changes in suppliers whenever a new Lord Steward was appointed. For several decades, the role of Lord Steward was not filled, so it could be that the contracts were rolled forward or spices purchased in non-standard ways.

FIGURE 46 - CLOVES - (BEVERIDGE 1965)



The clove prices, as shown in Figure 46, are moving quite closely together other than during the few years towards the end, but broadly, they are well aligned. It may be that given the smaller quantities of cloves being ordered, the prices are not actively managed or given a premium/discount for larger or smaller orders.

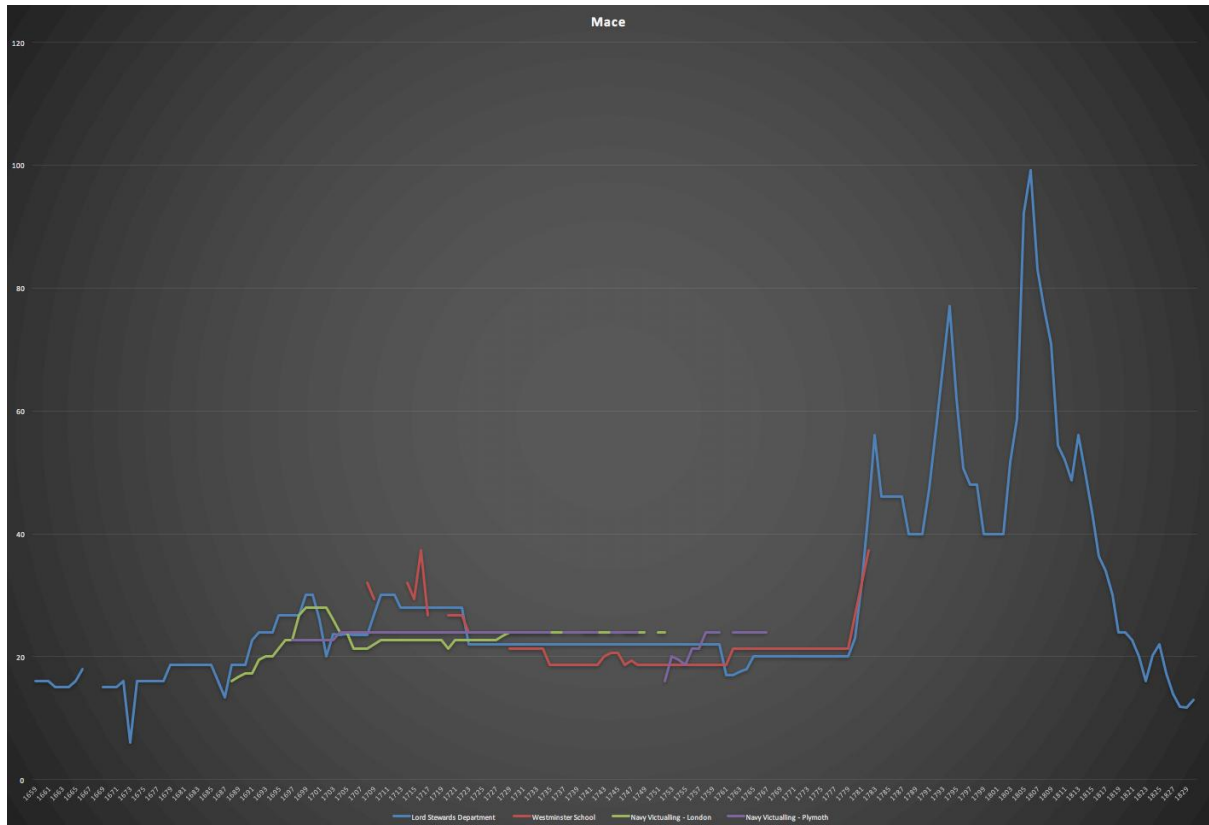
FIGURE 47 - NUTMEG - (BEVERIDGE 1965)



As with cinnamon, the Navy Victualling in London is the lowest of all prices for nutmeg in Figure 47, while the school is one of the higher ones. It is curious that the Royal Household is paying

such unreasonable prices, especially when it would be able to command good prices, credit, payment terms, etc. The prices in later years shoot up quite high, despite the increase in supply prices from Asia, which is inexplicable.

FIGURE 48 - MACE - (BEVERIDGE 1965)



Mace shows a similar behaviour to the previous spices in Figure 48, although the Lord Steward's department again is overpaying, especially compared to the Westminster School.

FIGURE 49 - GINGER - (BEVERIDGE 1965)

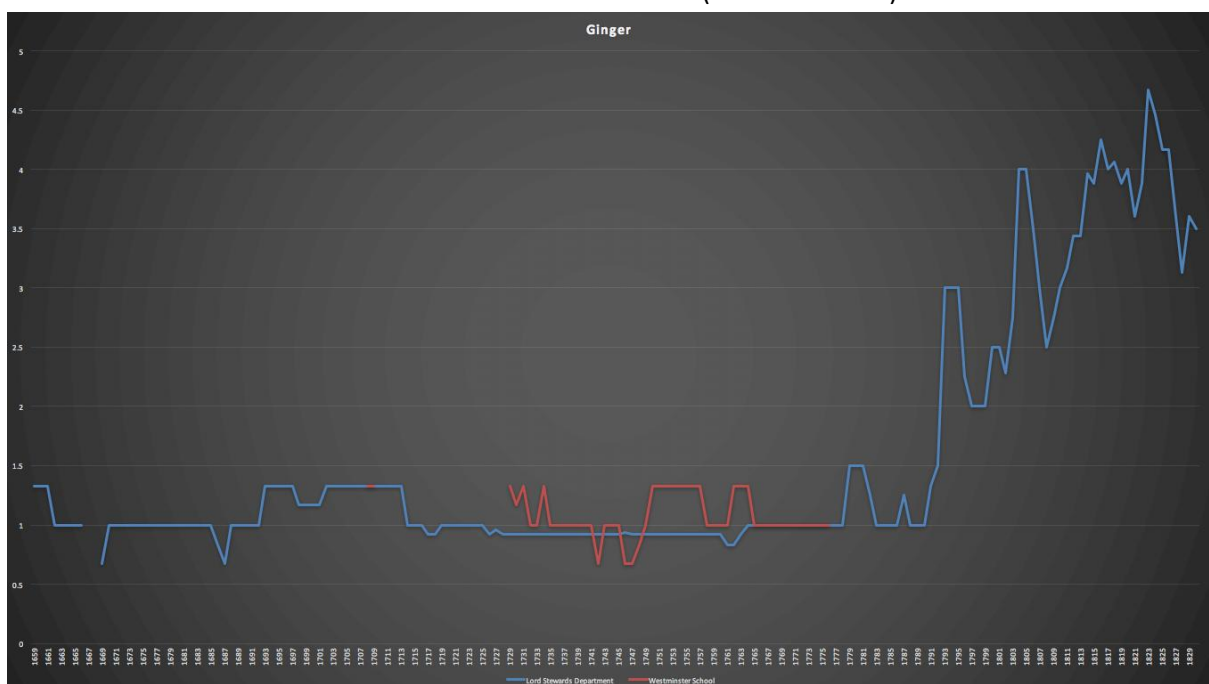
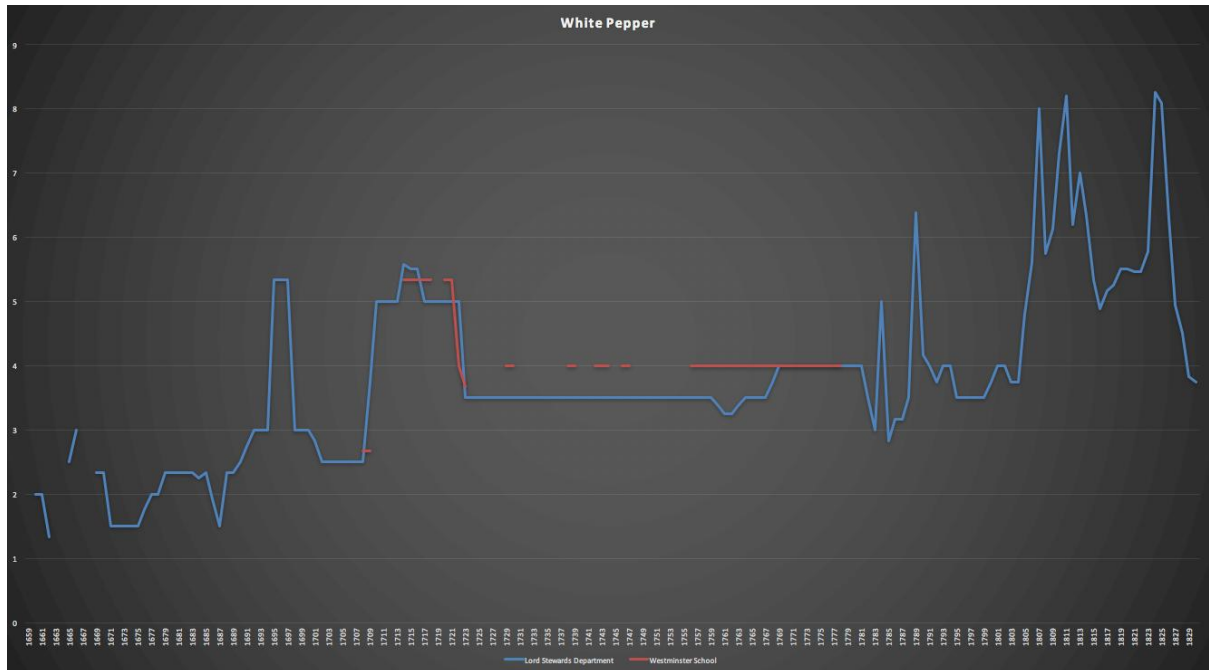


FIGURE 50 - WHITE PEPPER - (BEVERIDGE 1965)



Not much data to compare, but broadly the same pattern is seen for both white pepper and ginger in Figures 49 and 50 respectively, with the Westminster School being higher than the Lord Steward's Department. As mentioned before, it could be because of the smaller quantities ordered by the school compared to the Lord Steward's department.

FIGURE 51 - TAMARIND - (BEVERIDGE 1965)

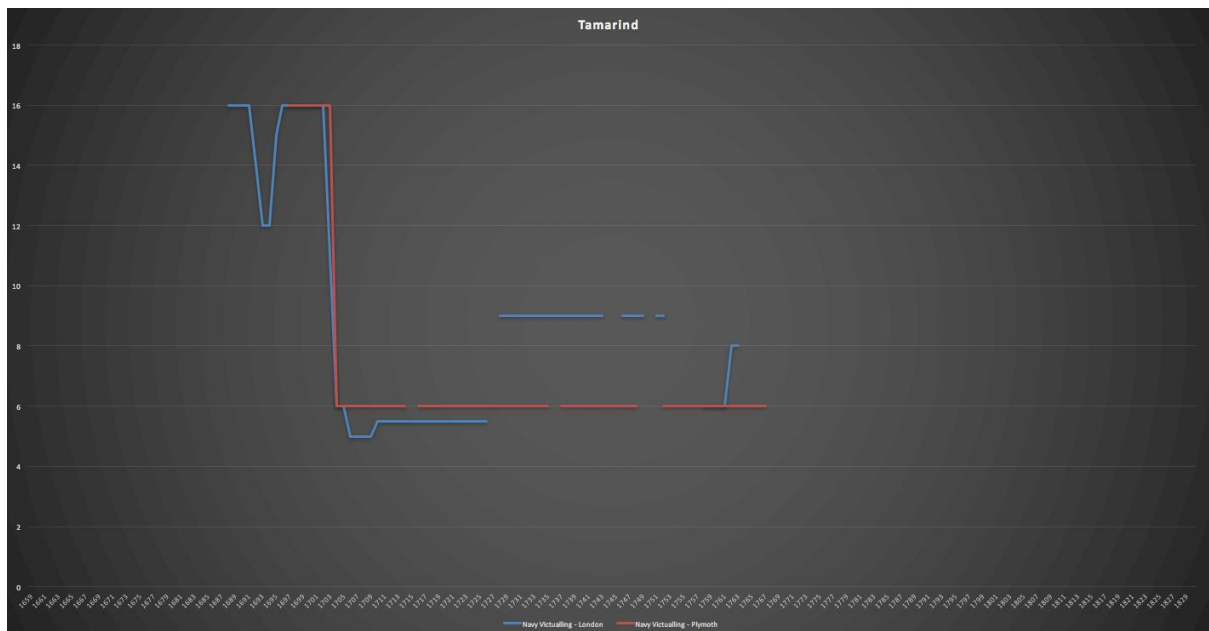
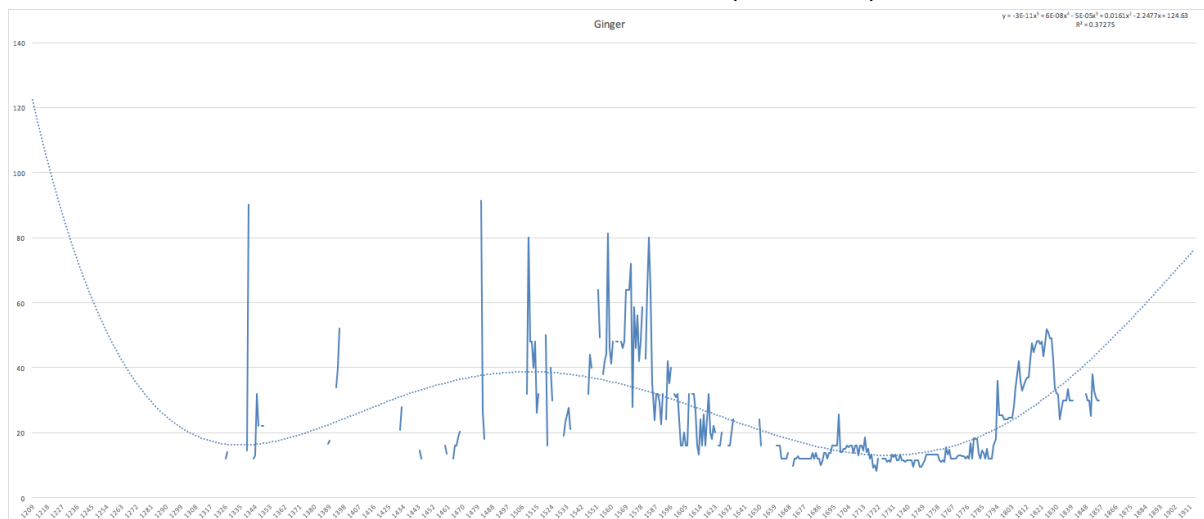


Figure 51 is for tamarind, only ordered by the Navy Victualling Departments in London and Plymouth. For the same department and spice, it is surprising that the data shows differences over the years. It could be that there is an additional transportation cost (tamarind is usually transported in a liquid state and transporting it in barrels after its purchase from the EIC's warehouses in London to Plymouth was expensive), but then for several years, the London prices are higher than Plymouth prices, which seems to be going against economic logic.



Gregory Clark provides an annual price series for English net agricultural output in the years 1200-1914, using twenty-six component series: wheat, barley, oats, rye, peas, beans, potatoes, hops, straw, mustard seed, saffron, hay, beef, mutton, pork, bacon, tallow, eggs, milk, cheese, butter, wool, firewood, timber, cider, and honey, using a consistent method to form series from existing published sources such as Rogers, Beveridge and Farmer and adding new data from the Agrarian History of England and Wales, Board of Trade and other primary sources.<sup>211</sup> For the purposes of this research, the following commodities are selected for analysis, mainly because they were mostly imported commodities, with the potential exception of sugar (beet), ginger, mustard, pepper and saffron which were also produced locally. Wage indices for farm workers, craftsmen and building labourers, were also included in the analysis.

FIGURE 52 - GINGER – (CLARK 2003)

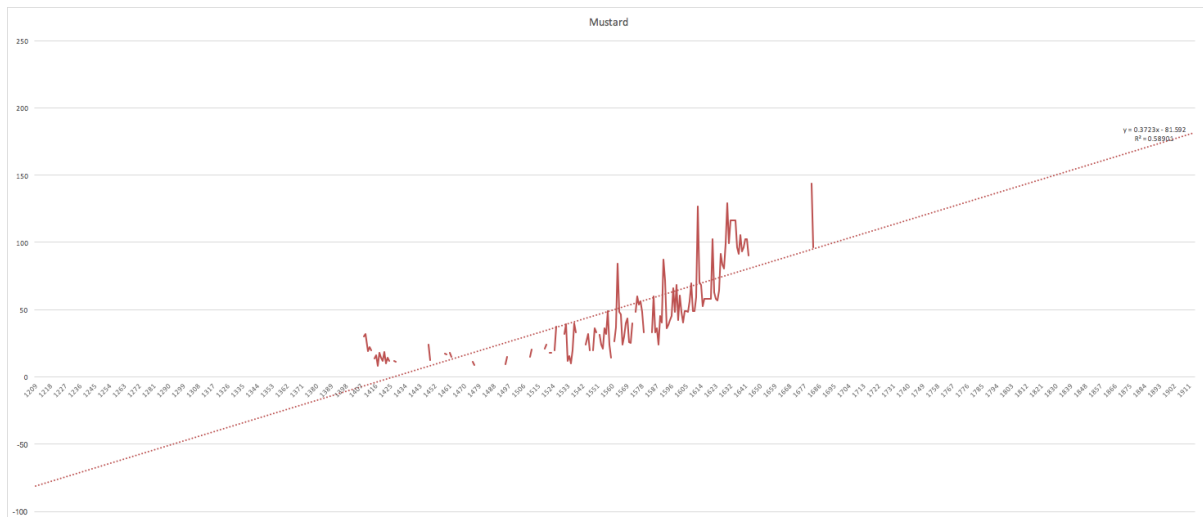


Ginger is mostly grown on tropical lands and was imported during this period from India and later from China. It came in several forms—powdered ginger, dried roots, candied ginger, etc. It had quite a volatile time in the early days, not surprising when the supply chain overland was long, tough, and difficult. The frequent outbreaks of plague in Europe and Asia also affected supply chain operations. The middle of the period shown in Figure 52 is when the land route was significantly disturbed by the Ottoman invasion of Egypt, disrupting the land route and then once the Portuguese/VOC/EIC started their sea routes, the volatility started to reduce the price till it rose again around the 1770s. This is curious, as increased supply (as seen from the customs data) should ideally have reduced the cost, although the countervailing explanation could be an increase in demand from either cooking or medicine (although there is no extant evidence). The prices then flattened out at the end, as seen in Figure 68 which leads one to believe that some equilibrium was reached between supply and demand.

<sup>211</sup>Clark, G. N, (2003) *Data on the History of the English Economy, 1150-1914*.  
, <http://faculty.econ.ucdavis.edu/faculty/gclark/data.html>, accessed September 20, 2020, archived at  
/web/20200908072528/<http://faculty.econ.ucdavis.edu/faculty/gclark/data.html>

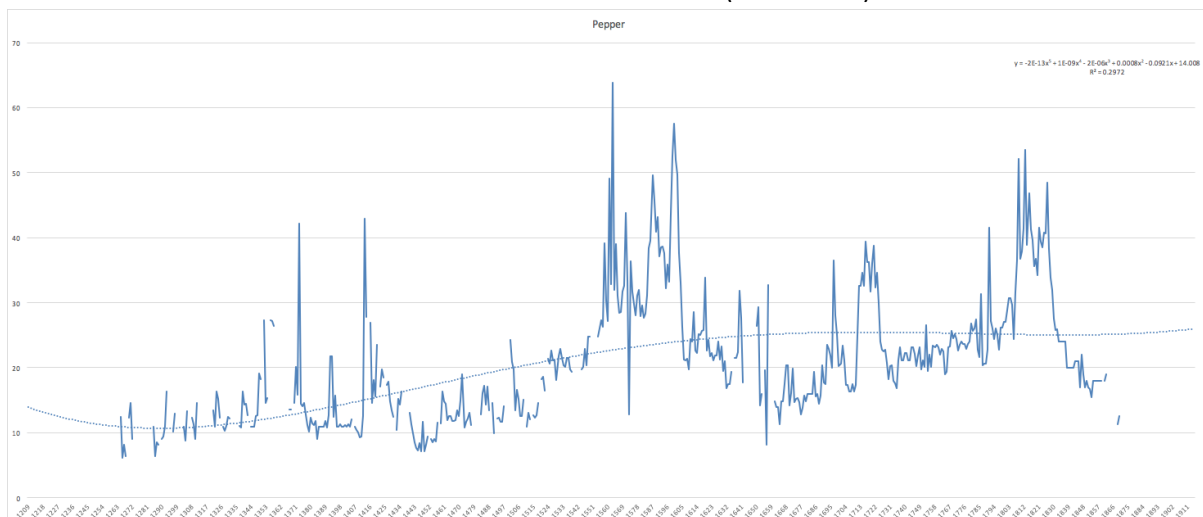


FIGURE 53 - MUSTARD – (CLARK 2003)



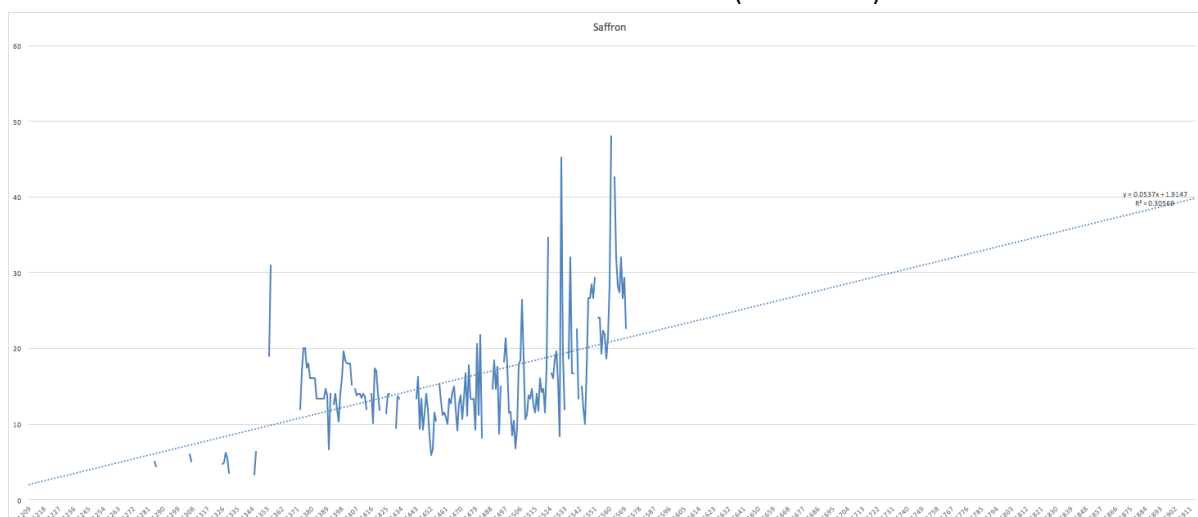
The volatility of the price series is understandable, as seen in Figure 53, given the import issues from Asia, especially the Middle Eastern disruption caused by the Ottomans and interminable squabbles with the Safavid Empire in the sixteenth century. The price rise is interesting, as this plant was also grown in England. The use of mustard in medicine and food changed the demand positively, whilst the supply could not keep up with it, driving the price upwards?

FIGURE 54 - PEPPER - (CLARK 2003)



The pepper series has been discussed several times earlier. Gregory Clark's dataset, in Figure 54, is broadly like the price patterns seen with Chaudhuri's dataset, although the EIC tried to control the wholesale price volatility, which is lower compared to the higher retail price volatility. To reiterate, prices show an increasing trend with spikes throughout the prolonged period. This reflects the supply challenges and the increase in demand for pepper for food as well as medicinal purposes.

FIGURE 55 - SAFFRON - (CLARK 2003)



The extremely high volatility in saffron prices in Figure 55 is to be expected due to its high price, which increases even more around the 1500s due to significant disruption in the Mediterranean and the overland spice trade. It is to be noted that saffron production in England fell as the climate changed, and this spice was then mostly imported.

FIGURE 56 - WAGE GROWTH - (CLARK 2003)

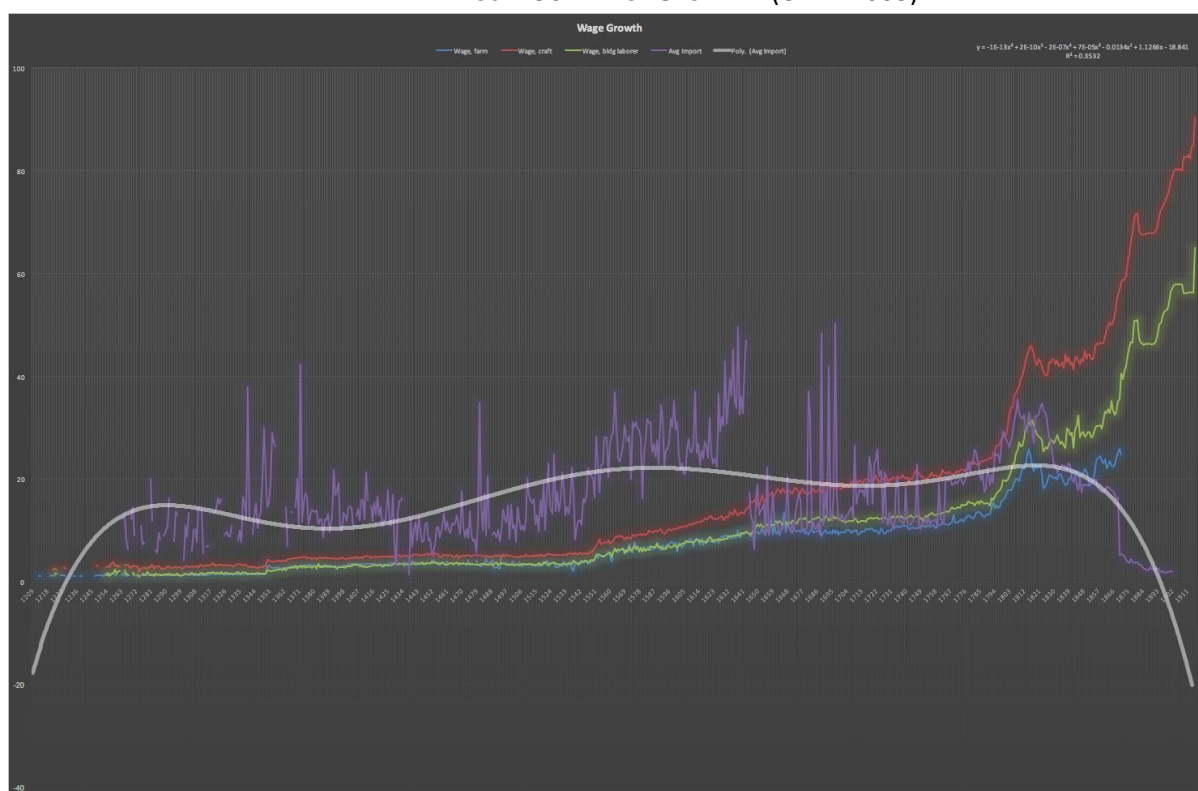


Figure 56 shows the wages of farm workers, craftsmen and building labourers (the red, yellow, and blue lines). A special imported goods index was created out of the other commodity series analysed above. The series in purple shows an interesting pattern, where, as expected, the imported goods were priced out of the market for these workers, though the wage growth in

England had been mainly flat.<sup>212</sup> This pattern remains until about the 1550s, when wage growth starts to pick up pace, although import prices also rise. Then around 1650, with the massive increase in imports from the EIC and VOC, the prices reduce and flatten, allowing wage growth to catch up and then move above the indices until 1850, where the import price index drops below the wage level consistently for the first time in centuries. We finish this dataset analysis by running a correlation matrix on the selected time series, which is shown in Table 14.

TABLE 14 - CORRELATIONS WITH SELECTED GREGORY CLARK 2003 TIME SERIES

	Coffee	Ginger	Mustard	Pepper	Raisins / currants	Saffron	Sugar	Tea	Tobacco	Avg Import	Wage, farm	Wage, craft	Wage, bldg
Coffee	1.000	-0.221	-0.149	0.005	-0.069	0.880	-0.058	-0.541	-0.057	0.131	0.618	0.053	-0.261
Ginger		1.000	-0.360	0.264	0.070	0.068	-0.052	-0.022	-0.021	-0.295	-0.051	0.355	-0.068
Mustard			1.000	0.153	0.549	-0.300	0.990	0.163	0.063	-0.453	0.517	0.803	0.128
Pepper				1.000	0.376	0.325	0.184	0.603	0.489	0.319	0.547	0.102	0.546
Raisins/currants					1.000	0.437	0.476	0.953	0.181	0.914	0.592	0.931	0.565
Saffron						1.000	0.376	0.785	0.869	0.869	0.681	0.416	0.389
Sugar							1.000	0.479	0.270	0.962	0.876	0.139	-0.003
Tea								1.000	-0.066	0.962	0.988	0.111	0.003
Tobacco									1.000	0.636	0.721	0.888	0.820
Avg Import										1.000	0.403	-0.047	-0.063
Wage, farm											1.000	0.961	0.984
Wage, craft												1.000	0.995
Wage, bldg laborer													1.000

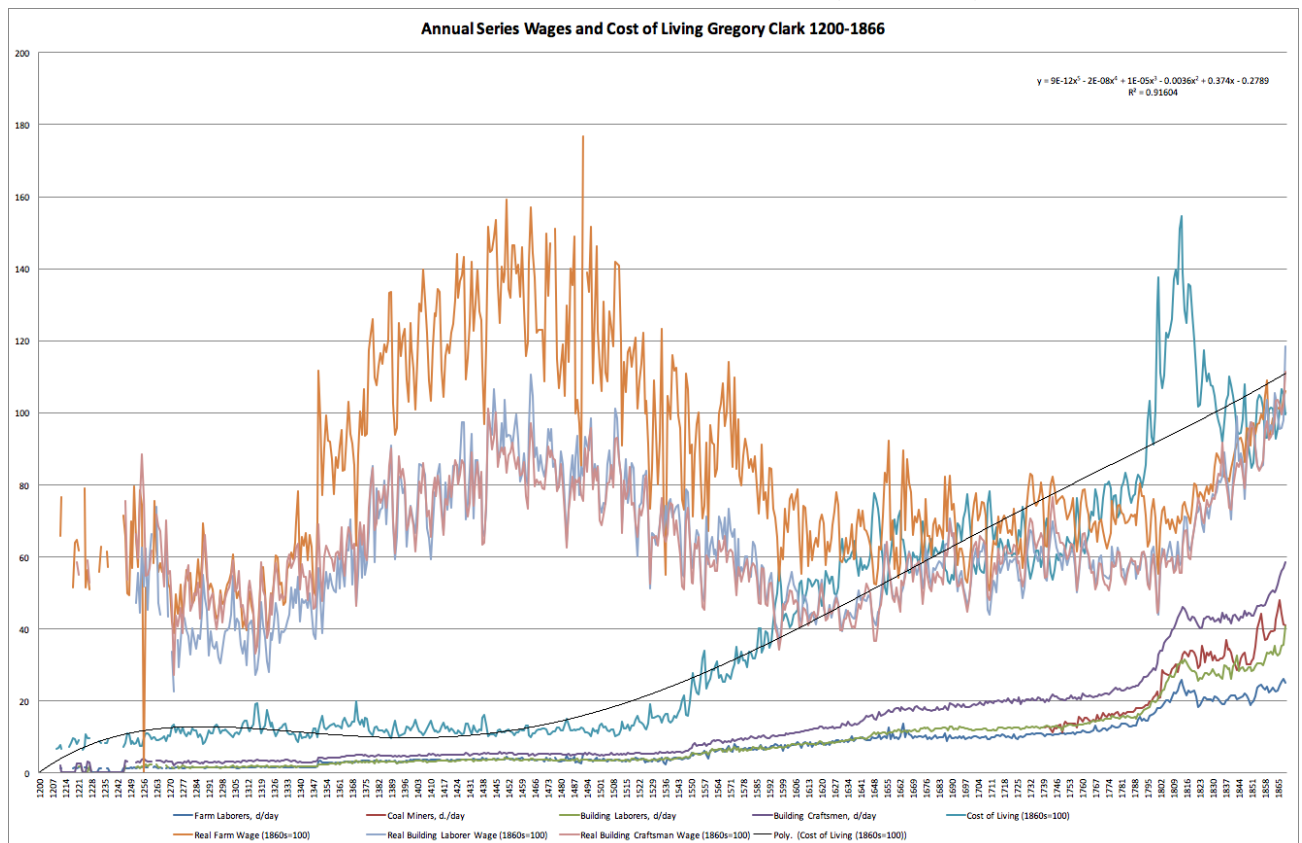
To reiterate, correlations do not imply causation; all that a correlation statistic demonstrates is to what degree there is a linear relationship between two variables. If positive, both variables move in the same direction, if negative then they move in the opposite direction. The values range between -1 (perfect negative correlation) to +1 perfect (positive correlation) and 0 standing for no correlation. The cells which are more than 0.5 either negative or positive are highlighted. First, the expected high correlations would be the correlations between the average import price index and the individual commodity prices, as the average import price index is constructed out of them. The three wage indices are, of course, highly correlated with each other for obvious reasons. The significant correlations are the strong negative ones, specifically the negative correlation between tea and coffee. Again, intuitively it makes sense, given that these two beverages were mutually fungible; an increase in one commodity will necessarily mean a drop in the other and vice versa. Positive correlations exist between saffron and coffee, mustard and raisins, sugar and mustard, tea with pepper, raisins and saffron and finally tobacco with saffron. It is difficult to ascribe reasons or justifications for this behaviour other than the fact that several of these pairs were imported together and that could be the reason behind the correlated price movements. Another inexplicable correlation is the high correlation between the farm workers' wages and most other commodities; the other two categories also show quite a high correlation with fewer commodities. The only potential rationale could be that these are retail prices. If the wages drop, then the price of these commodities will also drop, not because they would stop buying these expensive commodities, but because the wage drop is an indication that there is an economic slowdown. The same occurs if wages are rising, then the economy is doing well and the rich, royalty, aristocracy, professionals, wealthy and clergy will purchase more spices.

## 2.9. Wages and Agricultural Prices

<sup>212</sup> Clark, (2017)

Consumption of what are luxury goods, such as spices, is heavily dependent upon the earnings of the ultimate consumer. Earnings in England are an under-researched topic. The nobility, aristocracy, professionals, and clergy are obviously the major users of spices, but their consumption is not under debate. The Rogers data from various estates, colleges, and other institutions clearly show that they were not only able to afford these expensive spices but also ordered them regularly. The question is, are lower-class English citizens able to earn sufficiently to afford spices? What was their earning potential over time? This section is based on the data by Gregory Clark.<sup>213</sup>

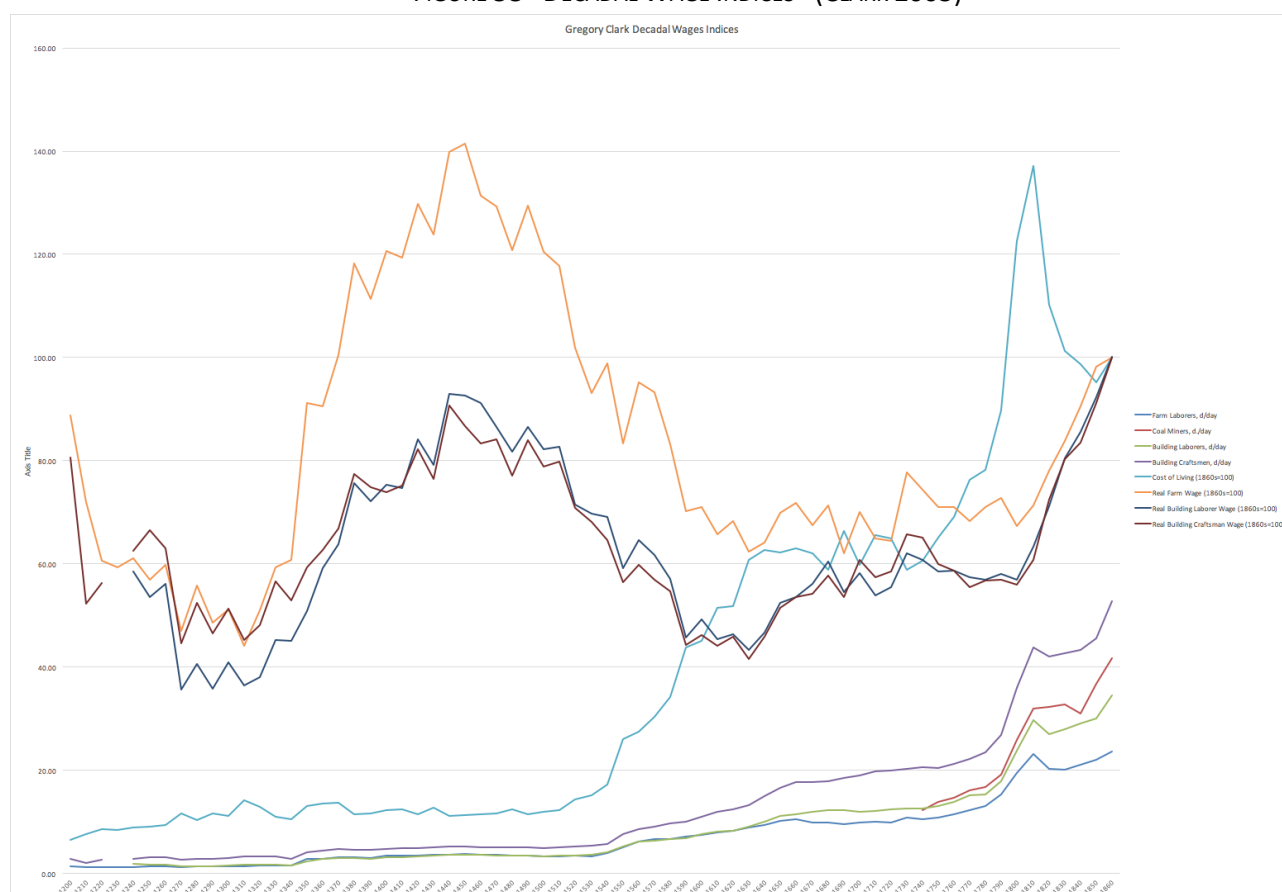
FIGURE 57 - WAGES AND COST OF LIVING - (CLARK 2003)



The annual data in Figure 57 shows some interesting patterns. The black line is the trend line for the cost-of-living index. If we compare the actual wages, then they are uniformly below the cost-of-living index, indicating that it would be simply impossible for the various craftsmen and labourers to live properly, much less afford spices. However, looking at the real wage series, they are all comfortably above the cost-of-living trend line for most of the period until around the 1600s when the cost-of-living index starts to move above the real wage index. Interestingly, this period coincides with the significant increase in spice supply from the VOC and the EIC.

<sup>213</sup>Clark, G. Nn.d. Data on the History of the English Economy, 1150-1914. Accessed September 08, 2020. <http://faculty.econ.ucdavis.edu/faculty/gclark/data.html>.

FIGURE 58 - DECADAL WAGE INDICES - (CLARK 2003)



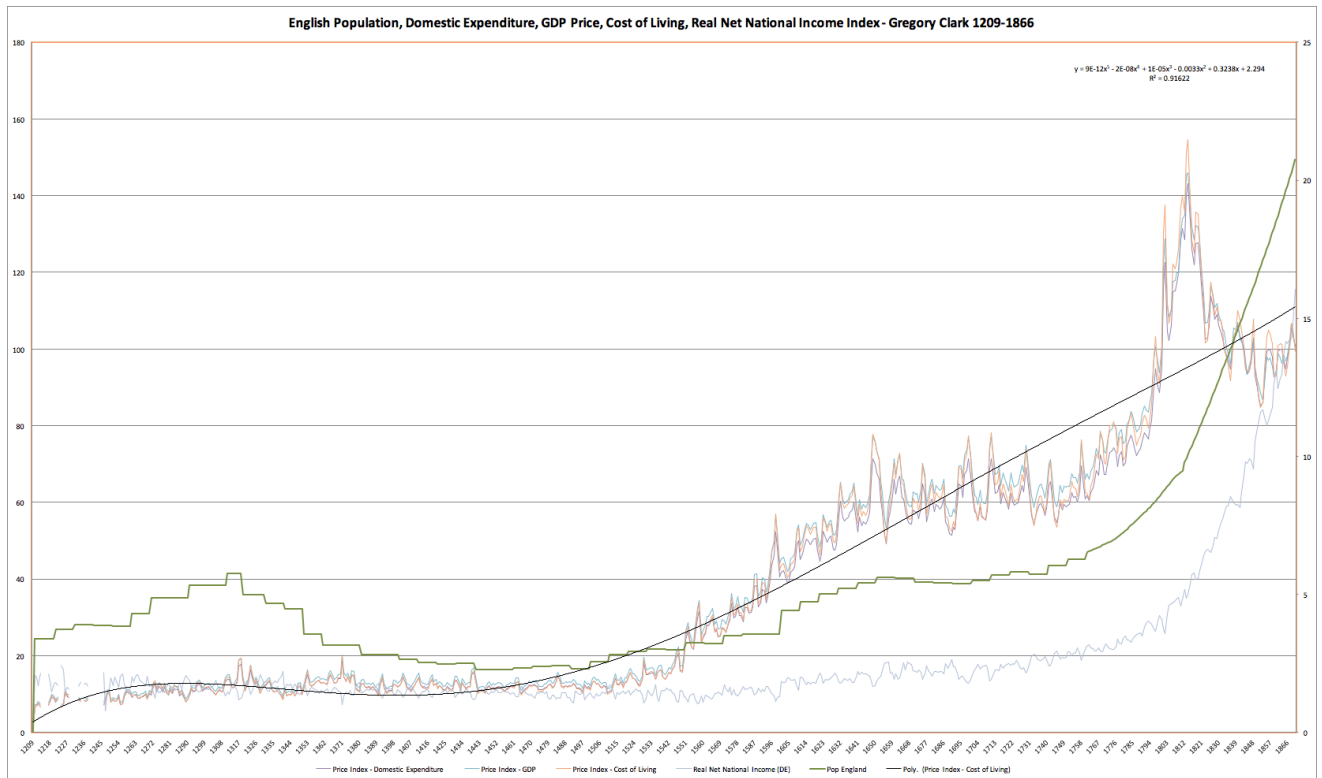
The smoothed decennial series does not change the patterns in Figure 58. The rising cost of living index intersecting with the real wages around the 1600s displays similar behaviour. Both graphs show a cyclical nature. Despite the lines crossing negatively, the real wage trend starts to rise as we move into the nineteenth century until it almost catches up with the cost of living around the end of the time series in 1865. This poses the question of whether expensive spices such as pepper were affordable. If we compare Chaudhuri's pepper price records over the latter end of the period, the prices also rise in many periods and at best remain flat. Given the price behaviour and assuming no change in demand, then based upon this wage and price behaviour, we can assume that pepper and other spices could have been afforded by labourers and craftsmen prior to the 1600s. However, after that, it would be more difficult despite additional supply, because the prices did not drop. If we relax the assumption that the demand for spices went down because of changes in dietary and food preferences (as did happen because food choices moved away from heavy sauce-based dishes to lighter French cuisine, which will be discussed in the next chapter), even then labourers and craftsmen could not afford the spices.

Gregory Clark has more data, which allows us to broaden the argument to include overall national income, expenditure, and cost of living price indices.<sup>214</sup> This includes all sectors of the economy and all socioeconomic classes.

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Clark, G. N *Data on the History of the English Economy, 1150-1914*. Accessed September 08, 2020. <http://faculty.econ.ucdavis.edu/faculty/gclark/data.html>.

FIGURE 59 - POPULATION, EXPENDITURE, ETC. (CLARK 2003)



The dark green line in Figure 59 is England's population growth, while the black line is the polynomial trend line of the price index of the cost of living. This graph shows a different picture, and the real net national income of England is far below the cost-of-living index after about the 1500s. A curious difference to the previous analysis. The Real National Income catches up with the cost of living towards the end of the period, but for almost two and a half centuries, within the period of this research, the income is below the cost of living. This obviously means that spices are, in effect, a cost too far for the nation. It was not possible to compare prices between various sources for the same year, given the sheer levels of assumptions, different weights used, different year ends and reliance on single suppliers.

## 2.10. The Spice Price Formation process

The purchase price paid by the consumer, as noted in the Rogers and Beveridge dataset discussed earlier, is formed from a complex chain reaching back to the producer. An overview of how the price formation process is established is given in this section.

The Production Price: The production price at the common Asian farm is difficult to determine and there is a lack of data, records, and research in this regard. The farmer could sell his produce in the local village market at a retail price, where a local broker could purchase the local produce. There could be a local wholesale spot market that supports the local trade and hooks into the local regional trade and there could also be a forward market, where the forward contract writer has already pre-established a price for the farm produce. The EIC would also have had some of their own plantations, even in the early days, or would contract with local growers.<sup>215</sup>

The Competition's Price: Intra-Asian trade was mentioned elsewhere, and this price also had a bearing on the overall price chain. Prices charged by competitors such as the VOC further complicated the matter. In one example, the EIC mentions VOC prices in Japan, which simultaneously give an indication of the intra-Asian trade and competitive prices the EIC had to handle: "By the way a [torn away] they bring pepper the price here is 40s. the 100 lb., cloves 5/. sterling the 100 lb., and these [torn away] and the price they sell them for."<sup>216</sup> Another comparison shows that the Dutch had more commodities to sell, which enabled them to command better prices: "Bantam pepper we sell for six taels and a half the pecul; but the Patania pepper is better, and as I understand the Dutch sell it at 10 taels or 100 mass the pecul, and cloves at 3 mass the catty, and nutmegs the like. But we have none of those commodities."<sup>217</sup>

The EIC Purchase Price: In certain locations, such as Bencoolen, the company directly owned the farms and thus had greater influence over the price. The EIC agents could buy directly from the farmers or local wholesale markets or ask for bids for a given number of orders. The bids were accepted or rejected depending upon the management's discretion or EIC orders. Pricing becomes more complicated as the same spice could be grown in various locations (for example, pepper, which was grown in many locations such as Bantam, Jambi, Macassar, Japara, Banjar, and other places in Southeast Asia, besides extensive farming in India and Sri Lanka). Local EIC factors could also purchase pepper and store it for a few months whilst waiting for EIC ships to arrive. As already noted, pepper damaged due to ballast was priced differently. The barter system was also operational and in this case, the pricing was quite different because it was highly dependent upon local supply and demand conditions—as described by the founder of the VOC's intra-Asian trading system, Jan Pieterszoon Coen, who described this strategy in a letter to the VOC's directors: "Piece goods from Gujarat we can barter for pepper and gold on the coast of Sumatra, rials and cotton from the [Coromandel] coast for the pepper of Bantem; sandalwood, pepper and rials we can barter for Chinese goods and Chinese gold; we can extract silver from Japan with Chinese goods (. . .) and rials from Arabia for spices and various other trifles (. . .) r."<sup>218</sup>

The local competition also significantly impacted both purchase price and value of presents.

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<sup>215</sup> Sainsbury, E B, (1922)

<sup>216</sup> Danvers, (1968), p208

<sup>217</sup> Ibid p248

<sup>218</sup> De Vries, (2010)

For example, EIC letters report issues with local competition such as:

“For pepper they demanded 50 dollars but, in the end, concerted for 22 1/2 dollars. Custom of pepper 6 percent, 2 other customs of 160 dollars or ps 8 the pr' or rather exactions were by them demanded but not paid. Great deceit he found in the weights, the bahar sometimes making 400 lb. English and other times but 340 lb., he found it about 360 lb. and rather to be desired, if they will yield unto it, to weigh at the Island than the Town. Many occasions of presents to be given in this business wherein you must do as you see cause.”<sup>219</sup> “pepper is at this present 2 r. per bag, but when the Hollanders do, it will rise.”<sup>220</sup>

There were instances where credit was involved, which also changed the prices. In the example quoted below, there is part payment, which further changes the price:

“In the house call to Mr Frayne for the 2000 rs. you paid unto Sir Henry in part payment of 5000 sacks of pepper bought from Kewe to give 3 percent, basse and to make payment thereof after the accomplishment of the 4000 bought formerly by us; the one half of the said 5000 sacks is for [zvoi^ away] if we shall have use thereof, and the other for Sir Henry with promise to him that if I shall not have need of it to spare it him at the price.”<sup>221</sup>

Additionally, local factors sometimes borrowed money to purchase spices, and that - in turn - influenced the price chain as apparent:

“In regard of the small capital, and being goods left at Bantam, the little hope of money here, uncertain hope to expect from Sum, and for the better securing of the fames her lading in pepper, we borrowed here 3,000 rials of Mr Larkin to be repaid at demand with 10 per cent interest, we also to sustain such losses as should accrue to hi-; voyage by the want thereof. Sending it with the captain, also we writ all jointly to Captain Jourdain that if the goods at Bantam, money etc. sent from hence were not sufficient to purchase her lading in pepper, then that Mr Jourdain would disburse and supply the want, upon employment of the like sum here in Patanie, in silks or what shall be by him required the next year.”<sup>222</sup>

The Overseas Transportation and Warehousing Price: The pepper purchased locally was then transported to a central location such as Surat, where it was stored for many months. Centralised storage like this made shipping and loading more efficient. Moreover, for intra-Asian trade, the land route could be supplied up into Central Asia, Iran, Arabia, and Africa. Independent shippers also quoted a shipment price if the shipping was not undertaken by the EIC's own ships. Another major price-affecting factor was shipwrecks. The loss of one or two ships could cause the price of spices to spike. Here is an example of a letter talking about transportation issues, local storage of spices, shipping challenges and lack of workforce, which all influenced the amount and price of stock stored, purchased, and dispatched. It is a long quote but worthwhile since it shows the complexity of the local supply and price formation process depends on multiple factors.

“And since, having considered farther of your Worships' order willing us to look far and near for other commodities and for venting of our own, which in Bantam will not be sold this ten years, as also having understood of the weakness of the Concord both of ship and men to

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<sup>219</sup> Danvers, (1968), p17

<sup>220</sup> *ibid*, p4-8

<sup>221</sup> *ibid*, p200

<sup>222</sup> *ibid*, p112-30



carry her for England, and the small quantity of pepper that she will carry and the great hopes we have received per via de Macassar and by others which lately came from Amboina, that they have kept great part of their cloves of the last year for the English, and the Bandanezes making continual wars with the Hollanders, hoping of the English ; all these reasons having been duly considered by the council of merchants it is thought necessary to send the Concord thither with divers commodities which is not here vendible, in the charge of George Ball, who is ordained to be principal factor for the voyage. The goods and money which we determine to send in her is as appeareth per invoice. The reason why the Concord hath stayed here so long since her voyage was determined to go that way is because we were in hope to have had some more men out of the ships which are to come out of England, and some other ship to go in company, for the more force with more facility the cloves will be gotten. We have built a pinnacle of some 25 tons of a junk which came from Sacadana, which doth go in company of the ship, which will be a great help to fetch cloves where the ship cannot go; but we have not men sufficient to man them both, for having provided the James with twelve men and with those that are dead there will not remain above 25 men for the ship and the pinnacle, therefore we determine to get some 10 or 12 blacks which will serve to do ordinary work. We are the more earnest to send that way because that if there should not go some ship this year there will be little hope to do any good hereafter; and this ship being so weak above water that it was great danger to send her for England. For Mr Petty before his death would not adventure to carry any dry commodities betwixt the decks, only pepper in the hold. Therefore we have laden aboard the James for the account of the Joint Stock 57 chests of all sorts of China silks, 24 chests of benjamin, 3,673 sacks of Bantam pepper, 172 1/2 peculs of cloves as per the particulars may appear in the invoice and bills of lading ; also we have laden 100 bahars of Priaman pepper at 400 lbs.uttle to the bahar, which was taken out of the Osiander and laden for the account of the Tenth Voyage, notwithstanding it is in the bills of lading for the account of the Joint Stock, which we did only to avoid cavils with the captain of the James, he being no great amigos with the captain of the Osiander nor any other.”<sup>223</sup>

The Landed Price is that set by the EIC on an individual cargo/fleet cargo prior to unloading at the London EIC docks. Sometimes it was difficult to put a valuation in London on the prices paid in Asia, so committees were established to review the letters and other information to establish a theoretical price. *“The Committees appointed to settle concerning the valuation of goods received at Bantam by the Advice being unable to agree, it is resolved that the United Stock shall be paid five rials of eight for every picul of pepper received, but no interest for the time elapsed; and that it shall be left to the Committees to agree concerning the value of the other goods, (ij p.)”*.<sup>224</sup>

The Taxed or Customs Value/Price: King's Customs officers valued the cargo based upon standard schedules and provided the taxed/customs value price. This area has been discussed earlier in the customs dataset section and remained static for decades. This caused much debate between the EIC and Customs. “A Court of Committees, January 16, 1663. .... Mr Jollife is desired to 'require of the Commissioners of the Customes that either they declare themselves satisfied without payment of any additionall duty for callicoes as lynnens, or that they will goe to tryall about it.”<sup>225</sup> He

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<sup>223</sup> ibid, p268-280

<sup>224</sup> Sainsbury, (1992), p17

<sup>225</sup> Ibid, p573

is also to urge them to pay the impost for dust of pepper exported, it being what the Company paid custom for at the importation, (i p.).”<sup>226</sup> The duties charged on spices sometimes changed and had to be levied before reaching the consumer. For example, additional duties were charged on grocery items. In 1690 coffee, cocoa nuts, tea and spices were hit by an additional impost called The New Duty. In 1704, a new Customs duty was added on top of the existing 5 per cent duty on spices. In 1709, the duty on nutmeg, cinnamon, cloves, and mace was doubled.<sup>227</sup> Sometimes this did not help; the steady increase in duties increased smuggling, and heavily increased adulteration, so that in 1722 the Government was forced to reduce the duty on pepper. Chancellor Walpole’s tariff paid a duty of 4d per lb on pepper, mace 3s, cloves 2s and nutmegs 1s. 6d per lb. The various taxes, duties and drawbacks imposed on spices started to get published widely and were used by the shipping lines. There were charges not just for imports but exports, packing and portage payable to the City of London as well.<sup>228</sup>

The Auction Price: the EIC would auction quarterly, which helped smooth out the price and allow more consistency in the market supply. The term “sold by the candle” was used.<sup>229</sup> This meant that the auction lasted as long as it takes a standard candle to burn, as the following quotes show:

- “A General Court of Sales, April 13, 1660. Sale of cardamoms, mace, sugar, Sarkhej indigo, ginger, Jambi, Malabar and Quilon pepper, quilts, eckbarrees, baftas, derguzees, and nassapores, with prices and names of purchasers. (2J pp.)”<sup>230</sup>
- “A Court of Committees, March 13, 1661 {Court Book, vol. xxiv, p352}. The remainder of the Malabar pepper and dust of pepper to be sold at the price last quoted.”<sup>231</sup>

The auction would be preceded by a sale catalogue. An example is given below in Figure 60 of a 1704 - East India Company’s Sale Catalogue – pepper.<sup>232</sup>

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<sup>226</sup> *ibid*, p290

<sup>227</sup> Rees, (1910), p48

<sup>228</sup> Steel, (1794), p230-35

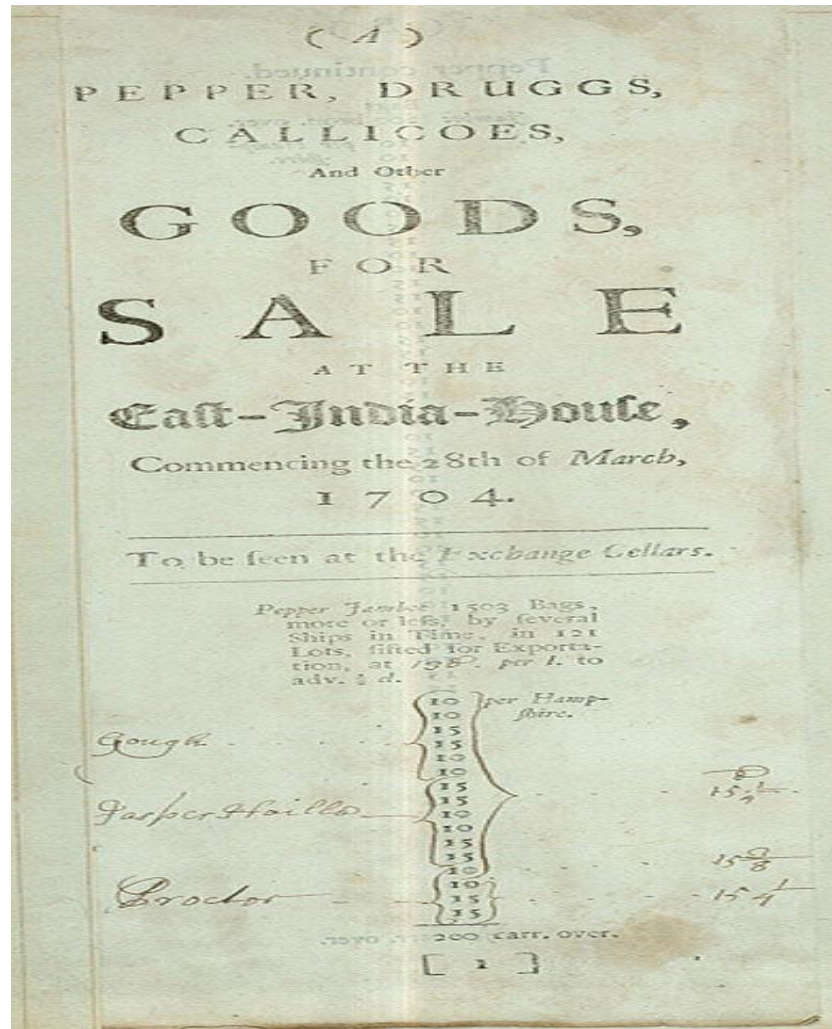
<sup>229</sup> Sainsbury, (1922), p304

<sup>230</sup> *ibid*, p14

<sup>231</sup> *ibid*, p99

<sup>232</sup> Anonymous, (1704)

FIGURE 60 - EIC SALE OF PEPPER 1704



The transcript is: *PEPPER, DRUGGS, CALLICOES, And Other GOODS, FOR SALE AT THE East-India-house, Commencing the 28<sup>th</sup> of March 1704. To be seen at the Exchange Cellars. pepper Jambet 1503 Bags, by several Ships in Time, in 121 Lots, sifted for Exportation at 198, per lb to adv 1/2d.* As can be seen, there are diverse types of pepper from different ships, and bids are then requested for different quantities of bags. The base price is 198 d per pound, and bids are in multiples of half a penny (d). The EIC's initiative-taking management of the price to be sold can be evidenced by this quote showing that the Company gave discounts, avoided sales and other techniques to clear stock and maintain prices:

"A Court of Committees, April 27, 1663 {Court Book, vol. xxiv, p612}. .... The Court orders that all goods intended for the next sale shall be sold at six months\* discount ending the 10th of November next, that a further two months shall be allowed on all goods cleared and taken away by that time, and one per cent, allowed in addition on all those cleared and taken away by the 10th of August next. Thomas King's bond concerning pepper is read and approved, and it is resolved that no pepper shall be put to the candle at the next sale, in accordance with the tenor of the said bond."<sup>233</sup>

<sup>233</sup> Sainsbury, (1922), p38

It was not just the market and other factors that concerned the EIC, but also royal intervention. In 1603, the King wanted his own stock to be sold first, otherwise the market would be depressed once the EIC stock was up for sale.

“After My very hartie comendacons Wheareas I am aduerticed by the Officers of the porte of London that there was entred in the name of you and the Company to the quantitie of 1030000 pound weight of pp wch was latelie taken out of those shippes come from the East Indies wherein you weare Adventurers and haue (as if affirmed) howsed and laid vpp accordinglie, fforasmuch as noe pet or pcell of the said peppe is to be sold before his maties greate Mass of pepp now remayneineing att Leaden Hall be first vttered and sold according to his maties good pleasure in that behalf signified & expressed in my late tres sen vnto the said Officers.”<sup>234</sup>

Sometimes the relationship with the Royal Establishment was strained. For example, in 1640, Charles I needed funds and therefore compelled the EIC to sell him the entire stock of pepper amounting to 607,522 lb for 2s 1d per lb. In exchange, he gave them four bonds of £14,000 each and one of £7283 promising that each of the bonds would be met every 6 months. Curiously, he immediately resold the pepper for cash at 1s 8D per lb thereby receiving £50,626 17s 1d. The obvious EIC profit remained on paper; the EIC kept unsuccessfully trying to redeem the bonds and then, for some inexplicable reason, received some royal parks in return. It is logical to assume that the King’s sales were picked up by many London merchants who were also part of the EIC.<sup>235</sup>

The Private Trade / Cargo Price: Frequently, EIC staff themselves also brought back their own spice cargo and often sold them on a private basis. This was usually arranged between the local retail or wholesale merchant and the EIC staff member, as can be seen in the following quote: “*He challengeth your license for sending home 5 or 6 cwt. pepper in each ship: and Wm. Cradle for the use of 20 or 30/. for private, and diverse others the like. He wondereth what should move the Company to bind some so strict from private trade and yet tolerate others; the reasons are that men's affections are free.*”<sup>236</sup>

These private trade licences were given by the EIC Court:<sup>237</sup>

“A Court of Committees, April ii, 1660 {Court Book, vol. xxiv, p254}- James Allen is admitted to the freedom by redemption, paying 5Z. Captain Michell is granted the same liberty as Captain Swanley and allowed to invest 200Z. for his own account in spice or white pepper, but is not to touch black. The Court agrees with Messrs. Lucas Lucy, Henry Davy, George Poyner, Daniel Farvax, and Captain Willliam Wildy, on behalf of the owners of the Advice, to seal bonds in 6,000/. penalty to refer all differences that may arise between them to the judgement of Messrs. Michael Godfrey, John Duckworth, and Captain John Limbrey, or any two of them, to determine by the loth of May next. A Court of Committees, April 18, 1660, .... The Court consents to deliver the ginger brought home as private trade in the Advice, belonging to Widow May, Julius Wildy, and John Howard, on Captain Wildy ...; also, to the ginger belonging to George Wortley .... Upon the petition of Rebecca Bolt, the Court gives permission for the delivery to her of a quantity of white pepper, now in their warehouse, but

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<sup>234</sup> ibid, p264

<sup>235</sup> Rees, (1910), p33-34

<sup>236</sup> Danvers, (1968), p189-191

<sup>237</sup> Sainsbury, (1922), p13

bought some time ago by her late husband, who served the Company many years at Bantam and died on his passage home in the Advice, (i p.)”<sup>238</sup>

The Overseas Import Price and Substitution Price: If the spices were imported from the continent, then those prices also impacted domestic prices. More interestingly, the price of substitutes, such as ginger being substituted for pepper in Poland, Turkey, and Italy, suppressed the demand for pepper. Similar behaviour was seen as chillies spread across Europe after being imported into Spain from the Americas. Once James I guaranteed that no pepper would be imported from the continent in November 1609, this helped the EIC better manage its imports and pricing.<sup>239</sup> There is some evidence that London merchants imported spices from the continent; for example, the firm of Rawlinson, Davison and Newman was doing business with a John Goddard of Rotterdam from March 19 to November 29, 1755, and spice transactions were undertaken to the value of £53,000.<sup>240</sup>

The London Wholesaler Price: London merchants, quite often, were also directors of the EIC and would bid at the auctions. Whilst there was indeed collusion, the prices were different from other bidders: “A Court of Committees, April 17, 1663.<sup>241</sup> *An agreement is made with the grocer, Thomas King, concerning the sale of pepper.*”<sup>242</sup> It also mattered if the London wholesaler had storage solutions or bought on order from other regional wholesalers, retail customers, or institutional customers such as schools, ministries, universities, and churches. In many cases, the wholesaler left his goods in EIC’s warehouses until after further onward sales. The sold goods were dispatched to the new buyer directly from the EIC’s warehouses. Some of this stock was re-exported to the Caribbean and North America, but the values were small.<sup>243</sup> These re-exports were undertaken by other companies and merchants rather than by EIC.<sup>244</sup>

The Regional Wholesaler Price is the price paid by the regional wholesalers in major regional cities and towns. Whilst London absorbed a significant amount of the spices, because of the large and rapidly growing ex-London population demanding a greater amount and variety of food supplies, there were considerable amounts of spice sent out to the regions.<sup>245</sup> For example, Rees mentions some instances, including one where the widow of John Dyvett, a spicer of Nottingham, brought action against John Melton for goods supplied for a total value of 17s, comprising of 2lbs of pepper at 2s, 1/4th of saffron at 3s, 1 lb of ginger at 2s, 1lb of cloves at 1s 6d, ¼ lb of mace at 1s, 1 lb of sanders at 6d, 1/4lb of cinnamon at 9d, 12 lbs of wax at 5s 6d and 3lbs of whole salt at 9d.<sup>246</sup> Comparing this with an invoice of goods sold by Robert Hickling whose shop was in Holborn in London dated August 18, 1742, gives an indication of the prices paid for some spices:

- mace 16s per lb
- cloves 10s per lb
- Black pepper 1s 8d per lb<sup>247</sup>

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<sup>238</sup> *ibid*, p14.

<sup>239</sup> Birwood, (1892), p210

<sup>240</sup> Rees, (1910), vol. II, p111

<sup>241</sup> *Ibid*, p.609

<sup>242</sup> Sainsbury, (1922), p307

<sup>243</sup> Davis, (1954)

<sup>244</sup> Bowen, (2002)

<sup>245</sup> Fisher, (1935)

<sup>246</sup> Rees, (1910), p89-90

<sup>247</sup> *ibid*, p51-52

The Retail Prices, as the name suggests, depended on who the customer was and why they were purchasing these spices. Landowners, individual townsmen, and villagers paid different prices depending upon whether they bought from a wholesaler, local retailer, or peddlers or from a local market/fair. The price fluctuations also occurred as religiously mandated dietary requirements at various times increased the demand for various spices, such as Saints' feast days, Lent, and Christmas. The longer run-time series examples of the retail price were discussed elsewhere in the chapter. More treatment of how spices were advertised is given later in the chapter.

The Price paid by institutional buyers was also different, simply because of the nature of the purchase, in bulk and at regular intervals. Buyers such as hospitals, the Navy and Admiralty, the King's Lord Steward, the universities and colleges of Oxford and Cambridge, etc., purchased spices in bulk as shown in the previous sections relating to the data by Beveridge and Rogers.

It should be noted that the above price formation chain does not include the prices paid for overland transport via the land route to Beirut or Alexandria to Venice and overland to Flanders or Amsterdam, or the alternative European charter firms such as the VOC and the Portuguese. The VOC had a small but significantly different price formation chain due to its strategy of controlling the production sources, and this factor is important as the EIC imported significant amounts from the Continent. The Portuguese price chain was again different, as it was a state company that imported the spices and then sold them at Flanders rather than locally in Lisbon. The above price chain formation process also does not include the smuggled goods, nor the spices landed in local ports, such as Southampton, which had a slightly different price chain due to them being for local/subregional sales. Finally, there is no evidence that the British EIC priced the goods in any other way, such as cost plus, return on investment, etc. Given that the dividends were fixed for decades, it is challenging to manage the supply chain and price formation, as well as have sufficient funds for investment purposes.

Now that the economic history, consumption, and price formation process have been explored, three other economic factors relating to spices are considered. First, how spices were used as financial assets, then given the high value/portability /ease of re-selling of spices -how spice crime flourished during this period and finally how spices were advertised.

## **2.11. Spices as Financial Assets**

Historically speaking, good financial assets share some characteristics. They are easily portable, high value, can be converted easily into money, they are well known, there are markets for them, some kind of regulatory oversight is placed over them to give them their backing and maintain standards, hold their value at worst and increase at best of times. Another characteristic of these financial assets is that they are frequently counterfeited, or fraud is associated with them. These can be bullion, jewellery, gems, etc. Most of these conditions have applied to spices throughout history. They are portable, of high value, can be converted into money or be paid for it, they are recognised across the world, with common markets even in smaller towns, with some element of guilds and regulatory oversight over them and hold their value over many years and decades. Spices are also heavily adulterated. Musk, saffron, and other such spices have been used as financial assets. In this section, some examples of how spices have been used as financial assets are explored.

While earlier than the early modern English period, the research by Kanzaka is useful, especially since local agricultural rental patterns do not change that much.<sup>248</sup> He reports on an analysis conducted on how tenants paid for manorial rent in the thirteenth century based on the hundred rolls in England. While some tenancies were indeed paid in money or in labour, the interesting ones are the payments in kind. At Nosterfield, Cambridgeshire, Simon held thirty acres of land and paid one pound of pepper per year. As one has seen in the price series in Chapter 2, this is not as strange as the price of pepper in the Thirteenth century was stable, if high. This would be equivalent to 8d per pound of pepper. Another example of rents paid in kind included one rental that included pepper, a rose, cumin, and a pair of gloves. There were 397 freeholdings whose rents were in kind (one third of the overall population). This could also be due to the paucity of bullion or ready money at that time. Kanzaka concludes by saying that the type and level of rents were primarily driven by common custom. The research does not analyse if such spice rents were geographically concentrated, for example, in proximity to London. This could have helped in getting spices and converting them into money if required. Levett also analysed the hundred rolls in some detail and states that the assessment and rent type were much dependent upon the history of the manor, and he seems to think that these were more symbolic dues due to history dating back before the Norman Conquest.<sup>249</sup>

Rogers reviewed the rentals later during the fifteenth and sixteenth centuries and specifically talks about the Manor of Dale, that has an estate which is let. A freeholder at the manor pays 10s and ½ pound of pepper. Another tenant who has a house and croft of a religious house pays ½ a pound of pepper.<sup>250</sup> During this period, Kerridge analyses the rental receipts of the Earls of Pembroke in 1567-8 and 1631-2.<sup>251</sup> In both surveys, separated by more than 60 years, the level and type of rents in kind have not changed, with rentals in 1lb of pepper, 2lb of cumin, rose, corn, spurs, and conies. One new entry relates to one peppercorn in one rent. Jenkins provides some more data on rentals given in spices by noting that mustard was the common rental for the convent lands of the Abbey of St. Germain des Pres in Paris and cumin, a pound of which was paid by St. Augustine's Abbey, Bristol, to the Lord of Wraxall in 1491-92 for Radford Mil.<sup>252</sup> Dickson Wright reports on how dowries were paid in pepper and several towns in Germany where rents were paid in pepper.<sup>253</sup> Freedman talks about how the term "*peppercorn rent*" came to be derived from the fact that the payment of tax or rent was made using pepper due to the paucity of bullion or just to remove the bother of exchanging real currency.<sup>254</sup>

An example of this can be seen in an advertisement in the Star Newspaper of London dating 5th February 1801 for a Warwickshire Freehold Estate. After providing a description of the location of the estate, and that it contains such as a church, 538 acres, 1 rood, 14 perches, much arable, meadow and pastureland, etc., it closes the advertisement by saying that *the tenants have been given on very low rents and others on leaves at a peppercorn rent, determinable with lives*. (Anonymous, 1801). Another advertisement can be seen in the same month from the Morning

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<sup>248</sup> Kanzaka (2002)

<sup>249</sup> Levett (1927)

<sup>250</sup> Rogers, (1887), vol. IV p94

<sup>251</sup> Kerridge, (1953)

<sup>252</sup> Jenkins, (1961)

<sup>253</sup> Dickson Wright (2011)

<sup>254</sup> Freedman (2008), p45

Chronicle of 12th February 1801, which refers to the sale of eight houses in Long Acre that are held for a term of 1000 years at a pepper-corn rent.<sup>255</sup>

There have been other developments when it comes to spices as financial assets. For example, the Amsterdam exchange had a flourishing and active futures market in commodities such as timber, spices, and hemp in addition to securities.<sup>256</sup> The Dutch East India Company shares were the first ever to trade on an exchange and be exchanged for cash. This made the company quite well capitalised and made it easier to raise capital and in return, the exchange was well populated with brokers and customers. In effect, what the spice merchants do is they would sell the spices well in advance for a pre-set price. This allowed the merchant to lock in the price (subject to the spice ship arrival and the quality being of an acceptable standard of course) well in advance. This would be done as a hedge against the risk of the price falling when the ship docked due to, say, oversupply (this would be quite often the case due to private trading by the company's own employees). The other side of this transaction would be done by another merchant who wants to protect against the prices rising if ships/cargo were lost or damaged. There are also other parties, such as speculators and short sellers, who want to bet against rising or falling prices and could use the forward/futures market.

This was based on how the Portuguese moved the focus of spice trading from Casa da India in Lisbon to the Portuguese Factory at Antwerp which was the heart of the mercantile framework in Europe in 1515. The Portuguese India trade and the great *Naus* Ships was financed by loans secured on the pepper cargoes.<sup>257</sup> As already mentioned, there was no organised spice futures market in London during the early modern period, the East India Company established a standard public auction mechanism at specified time intervals at London which does mimic some elements of a futures market.<sup>258</sup> Due to fire in the Royal Exchange in 1838, all of Lloyd's early records were destroyed so it is not possible to find out the details of how English East India Company cargos and shipping were insured. Leonard explains how the EIC trade between India and China was insured despite the lack of London records. One avenue for further research could be to evaluate the differences in insurance premiums based on the cargo, destination, routes, sectors, syndicates, and other aspects relating to spices, especially from the India to China Corridor for which records exist.<sup>259</sup>

Finally, spices as an asset (both in terms of working capital and inherited assets) have been covered earlier in the chapter. Stobart and Bailey have covered, for example, the presence of spices in the inventories of retail shop owners in England during the early modern period. Whilst there is evidence that spices were used as financial assets, it reduced quite significantly as the period went on, primarily with the development of the financial markets, legal markets, financial products, availability of currency and improvements in liquidity within the country.<sup>260</sup>

## 2.12. Spices in Crime

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<sup>255</sup> Anonymous, (1801)

<sup>256</sup> Bilginsoy, Cihan, (2014), p34

<sup>257</sup> Newitt, (2004), p93-4

<sup>258</sup> Chaudhuri, (2011), p132-33

<sup>259</sup> Leonard, (2012)

<sup>260</sup> Stobart and Bailey (2017)



As mentioned in the previous section, spices were financial assets and where there's an asset, there will be crime. This section gives perspectives on various dimensions of crime when spices were involved. Given the availability of East India Company documents, letters, data and records, there has been a significant amount of research conducted on the matter of crime when it comes to the East India Company. For example, Bowen undertakes a comprehensive review of the types of smuggling, theft, robbery and pilfering that the English East India Company faced and how they responded. Whilst most cases Bowen cites relate to tea and clothing, he also mentions spices. He talks about how the company tried to tackle the issues by reducing the very high import duties to make it uneconomical to smuggle untaxed goods into England; they tried to improve the shipping, personnel policies, land transportation and warehousing operations; and finally they worked with the customs service and navy to reduce these crimes.<sup>261</sup>

An example of how the British Exchequer raised taxes is from the Morning Post news item of 19th February 1801, where it talks about how Mr Pitt opened the budget. Besides raising duty on various items, it says that a duty of 6d a pound on pepper exported and of 3d on the home consumption is going to be levied.<sup>262</sup> Another newspaper, the Sun, on the same date, provides more information. Mr Pitt states that he expects to raise GBP 119,000 by raising this duty.<sup>263</sup> On 21st February 1801, the London Courier and Evening Gazette reported that pepper advanced that week due to the additional duty placed; the nominal price has jumped from 18d to 18 ½ d per lb.<sup>264</sup> On the other hand, as the Morning Post of 05 March 1802 reports, the bill to repeal the duties on cinnamon imported by the East India Company, and for imposing new duties in lieu thereof was read in Parliament and ordered to be read a second time the following day.<sup>265</sup> The London Courier and Evening Gazette reports on the 6th of March that the Cinnamon and Cassia Duty Bill was read for the second time and committed for Monday.<sup>266</sup> The next day, Mr Vansittart spoke in committee at parliament that the duties on cinnamon were too high and reduced the duty to 1s 6d per pound weight.<sup>267</sup> Finally, on 11 March 1802, the Cinnamon Duty Bill was read a third time and passed.<sup>268</sup>

This finally ended up with the company constructing the East India Docks in 1803. Bowen reports that the total losses of cargo between 1791 and 1810 were £2million which was clearly unacceptable. Another estimate is that 2% of the value was being lost to theft. Bowen traces the final stages of the voyage of an East Indiaman returning to England in depth and detail. He explains how smuggling, and theft happened at each of the stages, starting from the Irish point to the warehouse thefts. The Old Bailey records provide some individual records of how this crime happened, such as Joseph Percival, who stole a canvas bag valued at 6d and sixty pounds weight of pimento and allspice from a ship that lay between Union Stairs and Bell Dock. Joseph was a soldier but was engaged as a lumper (a man whose job is to pull the casks out of a ship) and tried to steal these spices.<sup>269</sup> Another similar example was of the conviction of John Mackensey and John Hawley, who stole a hempen sack of 6d weighing seventy pounds of pimento and allspice in 1760 from a ship

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<sup>261</sup> Bowen, (2002)

<sup>262</sup> Anonymous, (1801a)

<sup>263</sup> Anonymous, (1801b).

<sup>264</sup> Anonymous, (1801c)

<sup>265</sup> Anonymous, (1802a).

<sup>266</sup> Anonymous, (1802b).

<sup>267</sup> Anonymous, (1802c).

<sup>268</sup> Anonymous, (1802d).

<sup>269</sup> Trial of Joseph Percival (t17580113-25), (1758)

whilst being engaged in unloading the ship.<sup>270</sup> A case on the 15th of Sept 1784 involved somebody who would receive the stolen goods, in this case black pepper valued at 12s.<sup>271</sup> The defendant was acquitted as there was no evidence despite the accusation that the defendant had hidden pepper in his person and tried to sell it to another merchant. Another case is pertinent where William Boot and Thomas Crozier were indicted for stealing 112 pounds of weight of pepper belonging to the East India Company and a significant amount of detail is provided in the transcript on how the pepper was stolen whilst it was being processed for drying at a kiln.<sup>272</sup> McFadden reports on how English stevedores in Elizabeth I's reign who unloaded the spice ships were forbidden from wearing clothing with cuffs and also had their pockets sewn to discourage pilfering of peppercorns.<sup>273</sup> The other source of records for crime are *The Proceedings of the Old Bailey, (1674-1913)*, which are available online and contain 197,745 criminal trials held at London's central criminal court.<sup>274</sup> Besides these sources, the British Newspaper Archive provided another source for crime-related records. Searches were conducted using common spice related keywords and some representative cases are explored here for the period ending 1800.

Silver pepper boxes make an appearance from 1750 onwards, with many thefts and grand larceny cases referring to these boxes being stolen. Brass,<sup>275</sup> tin;<sup>276</sup> stone;<sup>277</sup> and pewter pepper boxes are also mentioned, which would be for poorer households or for day-to-day use. In some cases, mustard boxes and other spice boxes, along with pepper boxes, were stolen, besides other household and kitchen high-value objects such as spoons and cutlery, salt cellars, etc.<sup>278</sup> These silver pepper boxes are expensive, with various court cases referring to their values from 30s to 55s.<sup>279</sup> In an interesting case, an alibi of pounding pepper to boil in milk was given, although the perpetrator was actually punching farthings into halfpence.<sup>280</sup> Pepper castors make their appearance from 1760 onwards in the criminal records. Pepper boxes were used for storing whole or ground pepper and the cooks or guests at the table could spoon out the required amount of pepper. Castors have a perforated lid where ground pepper is placed and then can be sprinkled on top of the food. The instances of people stealing pepper and being charged for that crime dissipated after 1850.

Thefts occurred not just for simple ginger;<sup>281</sup> black ginger;<sup>282</sup> white ginger;<sup>283</sup> but also gingerbread;<sup>284</sup> and gingerbread moulds.<sup>285</sup> Many of the thefts happened from the ships or the lighters that were unloading the ships to take to the docks or at the docks. In one case, there seems to be a case where one protagonist assumed that ginger would be put in beer.<sup>286</sup> Storekeepers in the

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<sup>270</sup> Trial of John Mackensy John Hawley (t17600416-12), (1760)

<sup>271</sup> Trial of Hugh Doyle (t17840915-29), (1784)

<sup>272</sup> Trial of William Boot Thomas Crozier (t18080406-82), (1808).

<sup>273</sup> McFadden, (2012), p17

<sup>274</sup> <https://www.oldbaileyonline.org> accessed Sept 25, 2020

<sup>275</sup> trial of Margaret M'Collister Catharine Hall (t17640113-50), (1764)

<sup>276</sup> trial of Thomas Dublin(t17770910-27), (1777)

<sup>277</sup> trial of George Gibson(t17730707-37), (1773)

<sup>278</sup> trial of James Shaw (t16841008-15),(1684)

<sup>279</sup> trial of Thomas Spencer (t16860520-14), (1686).

<sup>280</sup> trial of Elizabeth Vaughan (t16931012-61), (1693)

<sup>281</sup> trial of James Penprice Edward Perry (t17520914-26), (1752)

<sup>282</sup> trial of Edward Evans George Potts (t17501017-1) (1750)

<sup>283</sup> trial of James Winstanly (t17381206-45), (1738)

<sup>284</sup> trial of John Loo (t16980608-28), (1698)

<sup>285</sup> trial of Thomas Fitch (t17300828-69), (1730)

<sup>286</sup> trial of John Dunnivan(t17940115-60), (1794)

warehouses were also found guilty of grand larceny for stealing many warehoused items such as raw sugar, tea, pepper, ginger, and a variety of other goods.<sup>287</sup> An advertisement in the *Caledonian Mercury* of 9th January 1735 talks about how a variety of goods, such as a parcel of borax, a parcel of ginger, and a few dozen bottles of red wine, are to be exposed to the public at the Customhouse of Leith, as they have all been condemned in His Majesty's Court of Exchequer. Presumably, this was due to it either being smuggled or fraudulent/adulterated or tampered with or being the proceeds of some other crime.<sup>288</sup>

There were limited instances in the record for cloves and within the time period of this research, only two relevant items: first, where William Hankinson was condemned for breaking open a house and stealing money, brandy, clove water and cinnamon water,<sup>289</sup> and second, where half a pound of cloves was stolen by Martha Wood.<sup>290</sup> There are also a couple of mentions of people in the record with Clove as their family name. The lack of theft of cloves is quite interesting and could indicate that cloves are not common (as can be seen from the fact that cloves are rarely mentioned in the cookbooks of this period compared to other spices).

One hundred and twenty-five items were seen in the records for nutmeg mainly, the theft of silver nutmeg graters, indicating that these were quite common over the Seventeenth to the Eighteenth century.<sup>291</sup> Graters were also made of different materials such as ivory<sup>292</sup> and tin.<sup>293</sup> These would not just be stolen from houses but also as we will see in the next chapter of Food and Spices, from people who were travelling and had a pocket nutmeg grater, as in this case where two gentlewomen were robbed of rings, some money and a silver nutmeg grater that they were carrying on their person.<sup>294</sup> A mention of a recipe of beer mixed with sugar and nutmeg is mentioned in a case of murder.<sup>295</sup> People would also carry nutmegs on their person, as shown in the trial of William Wager and Edward Baker, who were indicted for robbing Samuel Lewis on the Kings Highway and taking some money, medals, keys, and one nutmeg and sentenced to death.<sup>296</sup> Another interesting mention is that nutmeg graters seem to frequently contain notes and coins, perhaps as a convenient place to carry them.<sup>297</sup> A crime note in the *Newcastle Courant* of 30th Sept 1775 talks about how trunks are being cut from behind carriages in their ways to and from London. The note suggests using chains rather than cords and to ensure that the servants on horseback do not lose sight of the trunks near London. An example is given of a crime committed on 30th August 1775 where a trunk belonging to Mrs Strange, which contained quite a lot of valuable goods, including a silver nutmeg grater, was stolen.<sup>298</sup>

Mace was stolen from households along with other food items such as nutmegs, tea, chocolate, citron,<sup>299</sup> and in another case with starch, chocolate, nutmegs, and tea.<sup>300</sup> As can be seen

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<sup>287</sup> trial of Thomas Sparkes (t17981024-15) ,(1798)

<sup>288</sup> Anonymous, (1735)

<sup>289</sup> Ordinary of Newgate's Account, (OA17160608), (1716)

<sup>290</sup> trial of Martha Wood (t17360115-2), (1736)

<sup>291</sup> trial of John Daynter (t16900903-32), (1690)

<sup>292</sup> trial of James Pain , alias Page (t17381011-2),(1738)

<sup>293</sup> trial of Ambrose Cook (t17840114-54), (1784)

<sup>294</sup> Ordinary of Newgate's Account, (OA17301116), (1730).

<sup>295</sup> trial of William Stephens (t17360505-33), (1736)

<sup>296</sup> trial of William Wager, otherwise Corkey Wager Edward Baker (t17361208-14), (1736)

<sup>297</sup> trial of Jane Welch, alias Watkins Mary Moore (t18010415-82),(1801)

<sup>298</sup> Anonymous, (1775)

<sup>299</sup> trial of William Claxton Frances Claxton (t17210301-1), (1721)

<sup>300</sup> trial of Martha Wood (t17360115-2), (1736)

and to be expected, mace goes with nutmeg. Mace was also stolen from grocers and merchants, such as in this case belonging to William Hayter, who received two boxes of mace from the Queen of Hungary, of which one was stolen and then recovered.<sup>301</sup> Oil of mace was stolen in some cases, including one case from the warehouse of a wholesale druggist and judging by the quantity and values of the stolen goods, including 5.5 pounds of saffron cake, it would have been expensive. Thomas David, who was the porter at the warehouse, was sentenced to death for this crime.<sup>302</sup> As with the case mentioned in the above Nutmeg section, the sentencing to death for the mere crime of stealing these goods is quite harsh in the 1700's.

Cinnamon water was one of the items stolen. In one case, a significant amount of precious liquids was stolen from Richard Lisle, such as brandy, coloured water, surfeit water and angelica water including, Cinnamon Water. This was the second time that William Hankerson, who was Richard Lisle's servant, was indicted for stealing from the same master, and he was then sentenced to death.<sup>303</sup> Normal cinnamon, along with many other spices and other grocery goods, was also stolen from a grocer in a case of grand larceny, which ended up with the perpetrator being sentenced to exile.<sup>304</sup>

Charles Over and William Mitchel were indicted for stealing a very large amount of spices- 447lb. of nutmegs, worth 300l. 152lb. of cloves, value 26l. and 25lb. of cinnamon, value 5l from a ship named *Hannah* in the Thames were acquitted.<sup>305</sup> It was not just criminals but customs house officers who were also found to have stolen from ships that they were examining.<sup>306</sup> These two officers stole bandanas, a bushel of nutmegs, a bushel and a half of the cloves, a quantity of cinnamon and cloth. Theft from warehouses was also noted, as in the case of William Peacock, William Simpson and George Tanner, who were found guilty and transported for stealing significant amounts of warehouse goods such as opium, cochineal, cinnamon, oil, etc.<sup>307</sup> Finally, a case that dates to 1851 relates to a case against John Stephens, who seems to be a druggist or an apothecary. He seems to have administered an enema of composition powder, which consisted of bayberry bark, in four parts, hemlock bark from America in four parts, ground ginger in two parts, and cloves and cinnamon of one-eighth part each to a boy who then died.<sup>308</sup>

Searching for the word spice, the hits related to burglary or the theft of spice boxes.<sup>309</sup> A sampling of cases till the 1800's was taken. Sometimes it is seen that spice boxes contained money, so the entire box was stolen, presumably because the spice box was the place that contained other expensive and precious materials in the form of spices.<sup>310</sup> Many cases referred to the burglar breaking open the spice boxes, spice cupboards, or spice lockers, which bears support to the furniture discussed in the Food and Spices chapter that these were locked and protected from burglars and thieves. An interesting case of the theft of seven pounds of nutmegs worth 2s 6d from what was termed as a spice cellar was identified. It is a construction where expensive items such as

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<sup>301</sup> trial of William Watkins (t17570223-33), (1757)

<sup>302</sup> trial of Thomas Davis (t17700711-6), (1770)

<sup>303</sup> trial of William Hankerson (t17160517-9), (1716)

<sup>304</sup> Old Bailey Proceedings, (1759)

<sup>305</sup> trial of Charles Over William Mitchel (t18010701-93), (1801)

<sup>306</sup> Anonymous, (1801)

<sup>307</sup> trial of William Peacock William Simpson George Tanner (t18300415-230), (1830)

<sup>308</sup> trial of John Stephens (t18510818-1691), (1851)

<sup>309</sup> trial of Samuel Painter (t16830117-24), (1683)

<sup>310</sup> trial of Mary Wotton (t17350911-8), (1735)

nuts and spices were kept. It is big enough to have two staircases, one for entrance into the formal part of the house and the other into the servant's part or the loading bay.<sup>311</sup>

These are generally not just stolen by themselves but in combination with other household goods, such as in one case where *"two handkerchiefs, two pound of plumbs, a pound and a half of currants, two half ounces of ground spice, and two ounces of candied lemon, orange-peel, and two pictures"* were stolen.<sup>312</sup> A number of cases related to the theft of spices from spice merchants by their servants or hired hands, which indicates that their spice inventory used to be either kept at home or was in locations where these servants or labourers had access.<sup>313</sup> These spice merchants were also exposed to white-collar crime such as embezzlement by clerks employed by them.<sup>314</sup> As an interesting although unrelated point, quite a lot of the people mentioned in the cases were named as SPICE, such as the defendants, plaintiffs, witnesses, lawyers, and police. This name is of considerable use and one potential area of further research.

Adulteration is also an area of fraud and crime, although the Old Bailey records do not show any cases that were prosecuted for adulteration or fraud relating to spices. Fredrick Accum, a German chemist who moved to England, wrote a treatise in 1820 entitled *A Treatise on Adulterations of Food and Culinary Poisons* about how food is adulterated. He talks about how pepper is adulterated with linseed oil cakes, common clay, and cayenne pepper. Ground pepper is adulterated by mixing it with pepper dust or sweepings from pepper warehouses with cayenne pepper. He reports an act which was passed which forbids the adulteration of pepper: *"And whereas commodities made in imitation of pepper have of late been sold and found in the possession of various dealers in pepper, and other persons in Great Britain; be it therefore enacted, that from and after the said 5th day of July, 1819, if any commodity or substance shall be prepared by any person in imitation of pepper, shall be mixed with pepper, or sold or delivered as and for, or as a substitute for, pepper, or if any such commodity or substance, alone or mixed, shall be kept for sale, sold, or delivered, or shall be offered or exposed to sale, or shall be in the custody or possession of any dealer or seller of pepper, the same, together with all pepper with which the same shall be mixed, shall be forfeited, with the packages containing the same, and shall and may be seized by any officer of excise; and the person preparing, manufacturing, mixing as aforesaid, selling, exposing to sale, or delivering the same, or having the same in his, her, or their custody or possession, shall forfeit the sum of one hundred pounds."* He mentions how genuine mustard is rarely available in the shops, as it is commonly adulterated with wheaten flour mixed with cayenne pepper to give it the kick. Some other ways to adulterate is to include bay salt, radish seed and pea flour. He doubts the use of turmeric to colour this adulterated mustard, as it is very easily identified.<sup>315</sup>

## 2.13. Spices in advertisements & newspaper articles

To conclude this chapter, a generic search of newspapers was undertaken with the relevant spice keywords to see what has been mentioned in the news if not captured already in the previous chapters and sections. Some interesting aspects can be seen, such as an advertisement for packers.

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<sup>311</sup> trial of John Stronack (t18260406-14), (1826)

<sup>312</sup> trial of John Taylor Elizabeth Ringrose (t18150111-31), (1815)

<sup>313</sup> trial of William Field Fidler (t18191027-96), (1819)

<sup>314</sup> trial of Robert Emmerson (t18200412-65), (1820)

<sup>315</sup> Accum, (1820)

Using the British Newspaper Archive has some limitations; there are no scanned images of the newspapers prior to the 1700's so the selected period is necessarily short, from circa 1700 to circa 1830. Other issues with searching a scanned database are that the scans and optical character recognition frequently throw off false positives, such as gloves for cloves. The printing itself during this time used fonts that are difficult to read and frequently smeared or faded due to use of bad ink, storage issues and other environmental factors. Another big issue is that spice names were also used for place names (such as Saffron Walden and Saffron Hill) or for people's names. The "Mace" keyword also brought up "*Sergeant at Mace*" which is a position. This means that the number of hits for such keywords is hugely challenging to sift through. The effort required to unpack these issues was challenging; hence random sampling was used to gain an appreciation of how spices were referred to in advertisements. Another issue is that the scans were undertaken when the newspapers were bound into volumes; hence some of the edges of the pages were not visible as they were hidden inside the binding.

In this instance from the *Star (London)* newspaper, dating to 13 Feb 1801, a packing service is advertised, targeted at His Majesty's Royal Navy and Army officers and soldiers, who are proceeding for Channel Service (presumably this is aimed at the officers heading to France, Spain, or elsewhere on the European continent) or for long voyages. The packers promise to prepare and pack and provide a warrant that they will keep good for years in any climate and even for voyages of 12 months. They offer to pack rich sauces, mustard (which will keep good for 18 months), flour of mustard, salad oils, pickles, hams, tongues, cheese, oils, the essence of mint, thyme and parsley, German sausages, cayenne pepper and garlic. Any amount of goods can be packed at the shortest notice.<sup>316</sup>

Another advertisement for the sale of summer squash, which is imported from the USA, can be seen in the *Morning Post* of 27th February 1801.<sup>317</sup> The advertisement talks about how to grow it, how to serve it and how to take it with pepper, salt, and butter. An advertisement from *Gosport* mentions that eleven chests of cinnamon will be sold on Thursday, 7th day of January, 1802 at the India Arms Inn, landed from *La Liberte*, as a prize to His Majesty's ship *Argo*, James Bowen Commanding.<sup>318</sup> Another advertisement from the *Morning Post* of 10th February 1801 talks about a large cargo that has been landed and the range of goods is very wide, from Bengal oranges to Martinique citron to East India Madeira to Jamaica rum, Rotterdam Geneva brandy, China Lock Soy, pickled mangoes from Bombay, Russia tongues, etc. The advertisement closes with thanks to his nobility and gentry clientele (not surprising, as these items will be expensive) and gives the address as "Foreign Warehouse, Henrietta Street, Covent Garden".<sup>319</sup>

A report from the *Morning Chronicle*, 1st January 1802, gives a distinct perspective on the Emperor Charles the Fifth and Fouquieres the German Merchant.<sup>320</sup> The merchant had procured the exclusive rights to the spice trade and sold cinnamon at 2 ducats (a guinea) an ounce. The merchant advanced a generous sum of money to the emperor. The emperor gave a note to acknowledge the debt but then found himself unable to honour the note. The emperor visited the merchant in Augsburg and spoke of the difficulty in honouring the payment. The merchant, ordered a fire be built of some faggots of cinnamon, opened a drawer, showed the emperor the note, and then set it on

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<sup>316</sup> Anonymous, (1801)

<sup>317</sup> Anonymous, *Morning Post (London)*, (1801)

<sup>318</sup> Anonymous, *Star (London)*, (1801)

<sup>319</sup> Anonymous, *Morning Post (London)*, (1801)

<sup>320</sup> Anonymous, *Morning Chronicle (London)*, (1802)

fire on the faggots of cinnamon. This story, published in an English newspaper, is interesting from the perspective that cinnamon, even in 1802, is exceedingly rare and expensive. The news item will be to show that it is rare and used for expensive and wildly extravagant gestures.

A news report on how the government controlled the trade of spices when it came to the Dutch can be seen from the news report from the *London Courier and Evening Gazette* of 5th February 1802, which reported that whilst all commercial articles and merchandise may pass through Dutch territory, some exceptions, such as rags, foreign tea and foreign spices (such as cinnamon, nutmeg, cloves) cannot be in transit via Dutch territory.<sup>321</sup> It could be a competitive measure against the VOC or to support the British East India Company.

A report from the Imperial Parliament, House of Lords, dating 20th February 1801 makes for a curious case. A Mr Vansittartt requested an account of the quantity of Cinnamon and Cassia Lignea imported into England for three years preceding the 5th of January 1801, plus the amount of duty paid on these imports.<sup>322</sup> The newspaper reports that the decision was to order the data to be produced. On 2nd March, the *Sun of London* reports that Mr Vansittartt moved that the Act of the 27th Geo III should be read, and the house (of commons) should resolve itself into a committee to review the duties on cinnamon, cassia-lignea, hides, etc.<sup>323</sup> On 5th of March 1802, the *Evening Mail* reports that the Cinnamon Duty Bill was read in Parliament.<sup>324</sup>

The *Star of London*, dating to 8th January 1801, reports on the first report of the Commons Committee appointed to consider the present high price of provisions. The report primarily focuses on rice and refers to the evidence of Mr Barnard, Treasurer of the Foundling Hospital, who fed the children with a rice preparation that included 2 lbs ginger. The committee goes into deep detail on the recipe, frequency of dishes, the costs of each ingredient and whether it is palatable or not.<sup>325</sup>

The *London Courier and Evening Gazette* of 27th January 1801 report on a Paris paper that mentions that a letter has been received by the National Institute of France from the President of the Royal Society in London, communicating a sovereign remedy for the gout in the head or stomach. It consists of a certain quantity of ginger boiled in milk which helps the gout to descend to the extremities. There seems to be an interesting exchange of medical recipes and receipts across countries in the newspapers.<sup>326</sup>

Local newspapers reported prices of spices. For example, the *Ipswich Journal* of 22nd April 1721 reports on the cost of spices (per lb although this is not mentioned). It refers to pepper, cinnamon, nutmeg, mace, cloves, pimento, & ginger from Jamaica.<sup>327</sup> This lends credence to the point made that spices by 1721 were well established in terms of supply chain into the English other towns rather than just in London. Not just prices: some advertisements also reported the amount of goods landed in London. For example, the *Stamford Mercury* of 15 July 1736 reported that The East India Company imported a large array of goods such as textiles, 21,700 lbs of pepper, 28,100 lbs of turmeric from Bengal and Fort St. George (Madras/Chennai), a range of goods from Jamaica, USA, etc., and 2,900 lbs of cloves from Holland via 33 ships.<sup>328</sup> It is curious that this advertisement and

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<sup>321</sup> Anonymous, *London Courier and Evening Gazette* (London), (1802)

<sup>322</sup> Anonymous, *Morning Post* (London), (1802)

<sup>323</sup> Anonymous, *Sun* (London), (1802)

<sup>324</sup> Anonymous, *Evening Mail* (Dublin), (1801)

<sup>325</sup> Anonymous, *Star* (London), (1801)

<sup>326</sup> Anonymous, *London Courier and Evening Gazette* (London), 1802)

<sup>327</sup> Anonymous, *Ipswich Journal* (1721)

<sup>328</sup> Anonymous, *Stamford Mercury* (Lincolnshire, England), (1736)

many such others all point to much spice being imported from Holland. An avenue for further research could be to try to disentangle the imports from India and Southeast Asia versus spices imported from Holland.

The *Stamford Mercury* of 17th April 1735 prints what can only be termed as a patriotic poem, referring to a debate between a Spaniard and a Cheshire Man. The Spaniard praises his fine fruit and spice production twice a year, whilst the Cheshire man rebuts with Cheshire cheese, which is produced twice a day.<sup>329</sup> An advertisement for Dr. Daffey's Elixir in the *Newcastle Courant* of 13 August 1737 promises to cure a wide range of ailments, including *Fits of the Mother* and *Vapour from the Spices*. It is unclear what these ailments are.<sup>330</sup>

Advertisements provide some interesting views on day-to-day life, which are usually not reflected in the books or official records. For example, the implications of the Act of Parliament, which prohibited the sale of alcoholic and distilled liquors in quantities less than two gallons, were repealed in 1743. An advertisement in the *Ipswich Journal* of 09 April 1743 provides guidance from Thomas Kendall's Distillery that near the Red Lion Inn at Colchester or his shop at Cock Inn at Braintree, Essex, one can procure brandy, rum, cinnamon and Dr. Stephens's Water, Cloves, Aniseed, etc., distilled liquors in any quantity not less than one pint at reasonable rates.<sup>331</sup>

Advertisements also show interesting perspectives on the last mile sales. In Chapter 2, it was presumed that the sales of spices outside London would happen via shops or via peddlers. An advertisement in the *Caledonian Mercury* of 16th March 1725 indicates that Mrs Ruchhead (who placed the advertisement) recently came from London and carried with her a package of cordial waters. These include citron water, double cinnamon water, double aniseed water, clove water, etc. She would sell these from her cordial water warehouse below the back of the Main Guard (this is the main location), although she is also willing to sell this from her cellar at Leith, in the Rotten Raw, under Mr Wilkie's House.<sup>332</sup> So going by what is in the advertisement, the lady could potentially be a domestic servant or housekeeper who accompanied her master to London and brought back this package although this is purely supposition. Still, it looks like sales also used to happen out of warehouses and homes, including cellars. In an advertisement in the same newspaper, *Caledonian Mercury* of 18 Sept 1732, we find mention of clove brandy. This is not a formulation that has been identified before, but given the issues relating to printing and scanning, it could well be that a comma or semicolon is missing.<sup>333</sup>

An advertisement for milling provides some more detail on the supply chain. The advertisement in the *Ipswich Journal* dating to 3rd November 1739 says that there are two large mills, and the miller can supply any country shopkeeper upon cheaper terms than any man in London. The types of items that can be milled into powder include liquorice, turmeric, fenugreek, horse spice, aniseeds, cumin seeds, ginger, etc. He also offers volume discounts for people ordering 56 lb at a time.<sup>334</sup> He placed a similar advertisement in the *Caledonian Mercury* on 20th November 1739 as well but also referred to a few other items such as almonds. Interestingly, he seems not only to aim his work at country shopkeepers but also at apothecaries, as he says that he can supply the

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<sup>329</sup> Anonymous, *Stamford Mercury (Stamford)*, (1735)

<sup>330</sup> Anonymous, *Newcastle Courant, (Newcastle)*, (1737)

<sup>331</sup> Anonymous, *Ipswich Journal (Ipswich)*, (1743)

<sup>332</sup> Anonymous, *Caledonian Mercury (Midlothian, Scotland)*, (1725)

<sup>333</sup> Anonymous, *Caledonian Mercury (Midlothian, Scotland)*, (1732)

<sup>334</sup> Anonymous, *Ipswich Journal (Ipswich)*, (1739)



spices for Venice Treacle Mithridate or anything else that is wanted.<sup>335</sup> He repeats the Ipswich Journal advertisement on 24th November 1739.<sup>336</sup> These were the only three advertisements identified for the same seller. The *Derby Mercury* of 25 June 1741 also contains advertisements for a variety of spices, powdered goods, medicines, oils, liquids, watercolours, snuff, etc.<sup>337</sup>

## 2.14. Conclusion

This chapter on the Economic History of Spices presented and analysed several aspects of spices, such as the production and valuation of spices, the pricing mechanisms, the consumer income, and wage aspects relating to affordability, imports and exports, storage, etc., all which influenced the spice supply in England during the early modern Times. Besides these primary factors, secondary factors such as how spices were used as financial assets, how they were the objects of crime and how spices were advertised showed the second-order impact of spices.

The price history of spices-when looked at the entire value chain and across the relevant time periods (prior to the opening of the sea route, after the sea route, and the industrialisation of the spice trade by the Portuguese to the EIC) is highly volatile. Surprisingly, despite the sharp increase in production and transportation and lack of substantial inflation, the prices of spices kept on rising across the early modern period. This did not mean that the usage dropped; the increase in discretionary income shows that they kept on being increasingly affordable. The way the VOC and EIC maintained the original purchase price for decades showed how much controlling production meant for the profitability/sales of the spices in Europe. This is one of the main drivers of the imperial push to Asia to control the sources of supply. The relative value of the spices as compared to all other imports did drop over the period as other products became more attractive, such as textiles and manufactured goods. Despite that, spices held value and were frequently a target for crime as they fit into perfect crime objects (small, easily transportable, and hidden and easily disposed of). The steadily increasing advertisements for spices for sale or packing show that the adoption of spices increased substantially across all the cultures with a massive increase in availability. Finally, it should be noted that the absolute volumes of spices being imported started to drop and towards the end of the periods, there showed substantial drops in imports.

What was quite interesting was the infrastructure in London for imports and government intervention. The massive increase in imports created a substantial development out of the London Pool into acres of warehouses, docks, processing centres, housing and the like. On the other hand, the customs data (such as wrong or out-of-date valuations) showed the dead hand of the state and clearly indicates the government was very rudimentary back then when it had to deal with such massive expansion of the economy. Tax policies were blunt, and there was, most likely, substantial scope for corruption. The investigation of the domestic English supply chain showed how the increase in supply landing in London and demand across the country bulked up the presence of spices across the country down to the village shops. The presence of such high-value goods like spices in village shops indicates that there was greater adoption of spices by the general population rather than in previous generations, where only the rich, aristocrats and religious orders could afford spices, which were usually ordered from London. Tracing the price increases on each step of the

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<sup>335</sup> Anonymous, *Caledonian Mercury* (Midlothian, Scotland), (1739)

<sup>336</sup> Anonymous, *Ipswich Journal* (Ipswich), (1739)

<sup>337</sup> Anonymous, *Derby Mercury* (Derbyshire), (1741)

supply chain, across from the production sites in the Moluccas to the European landing ports to warehousing, sales, and then distribution across the domestic supply chain right to the ultimate retail price shows how the prices increased exponentially as the spices neared the end customer. The lack of replaceability of supply as one went further away from the source of production, the challenges in transportation and the higher costs of storage across years to smooth out the volatility of prices all meant that the end customer still paid high prices despite the increase in supply.

All these factors help inform the analysis of how English society used spices in a variety of ways, including in food, magic, medicines, perfumes, financial investments, clothing, crime and advertisements, and the related spice-buying behaviour. The data shows an increase in the imports and consumption of spices at the beginning of the period and then a slow reduction over the period and, in some cases, sharp declines at the end of the period. In the next chapter, the use of spices in English food over the English early modern period is explored.

## 3. Spices and Food in Early Modern England

### 3.1. Introduction

The previous chapter relating to the economic history of spices explored spice pricing, production, consumer income, imports, exports, storage, and related matters based on the spice model developed in the methodology section of Chapter 1. From that base, this research starts to explore the spice buying and usage behaviour in food preparation. The chapter explores the state of spices and food in the Middle Ages and then reviews how spices were used in nutrition during the early modern period. It looks at what recipe books suggested, how food was presented in art and literature and ends with some thoughts on what happened after the Battle of Waterloo—which changed the way the English looked at food and spices.

The growth of the Columbian Exchange, driven by the various European nations between the new and old worlds, from the Asian possessions and new sea trade routes back to Europe, made for very big changes to British diets. British cooks gained new access to vanilla and chillies, from the Americas and vastly greater amounts of spices from Africa (grains of paradise, peppermint) and from Asia (cinnamon, ginger, pepper, nutmeg), which became staples in British kitchens.<sup>338</sup> Whilst we don't have good data prior to the early modern period as seen in the previous chapter, the European supply shock from the East India Companies over the early modern period via the sea route was substantially higher than in previous periods. For example, between 1664 and 1760, the average yearly imports just by the English EIC were nearly 1,000 tons of pepper, and in the first third of this period, the average used to be between 2000 and 4000 tons of pepper. This is an extraordinarily large amount of pepper, and most of this spice would be heading straight to the kitchens for food and medicinal purposes. Even rarer and more expensive spices, which are used much more sparingly, such as cloves and cardamom, saw averages of 5 tons per year (over 1700-1780) via a single port.<sup>339</sup>

### 3.2. Spices and Food before the Early Modern Period

Hieatt and Butler mention that the substantial written proof of cooking with spices in England is in the *Forme of Cury* (the Method of Cooking), written c.1390 AD by the chief master cooks of King Richard II.<sup>340</sup> The name '*The Forme of Cury*' was given to the manuscript by Samuel Pegge, and his rendition was used in the following analysis.<sup>341</sup> Each recipe was analysed to extricate which spices were used and marked accordingly. The spices identified were saffron, ginger, cinnamon, mace, cloves, nutmeg and pepper, and the herbs garlic, galangal, cardamom, and spikenard. Pegge also identified some interesting powders, such as "*I take powder-douce to be either powder of galyngal, ...or a compound made of sundry aromatic spices ground or beaten small and kept always ready at hand in some proper receptacle....*" And Powder-fort...seems to be a mixture likewise of the warmer spices, pepper, ginger, &c. pulverized: hence we have "*powder-fort of*

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<sup>338</sup> Herbert (2024)

<sup>339</sup> See Chapter 2 for EIC data from Chaudhuri 1979

<sup>340</sup> Anonymous, (1390)

<sup>341</sup> Pegge, (1780)

gynger, other of canel...If you will suppose it to be kept ready prepared by the vender, it may be the \_powder-marchant.”.<sup>342</sup> In her book, *The Medieval Cookbook*, Maggie Black suggests that powder fort contained black pepper, ginger, cloves or cumin and other strong spices. Powder douce contained milder, sweeter spices such as cinnamon and sugar.<sup>343</sup>

While many spices and herbs were grown locally, ordering from specialist spicers and apothecaries was recorded. In this instance, a Gloucestershire merchant in 1395 ordered powdered ginger, wormseed, and frankincense. The merchant discovered that he was given rapeseed and radish root for ginger, tansy seed for wormseed and resin for frankincense, and complained about the fraud and adulteration.<sup>344</sup> Additionally, something called “gode powder” is mentioned; however, without any further elucidation, making it impossible to determine its contents. The spelling resembles powder douce, but for the purposes of this analysis,<sup>345</sup> has been kept separate. The numbering in Pegge’s book is curious, as some numbers were skipped. Therefore, reconciling these numbers with the numbers in the original scroll was impossible; hence Pegge’s numbers were used. Both graphical and tabular results are shown in Figure 61 and Table 15, respectively.

FIGURE 61 - FORME OF CURY GRAPHICAL ANALYSIS 1390

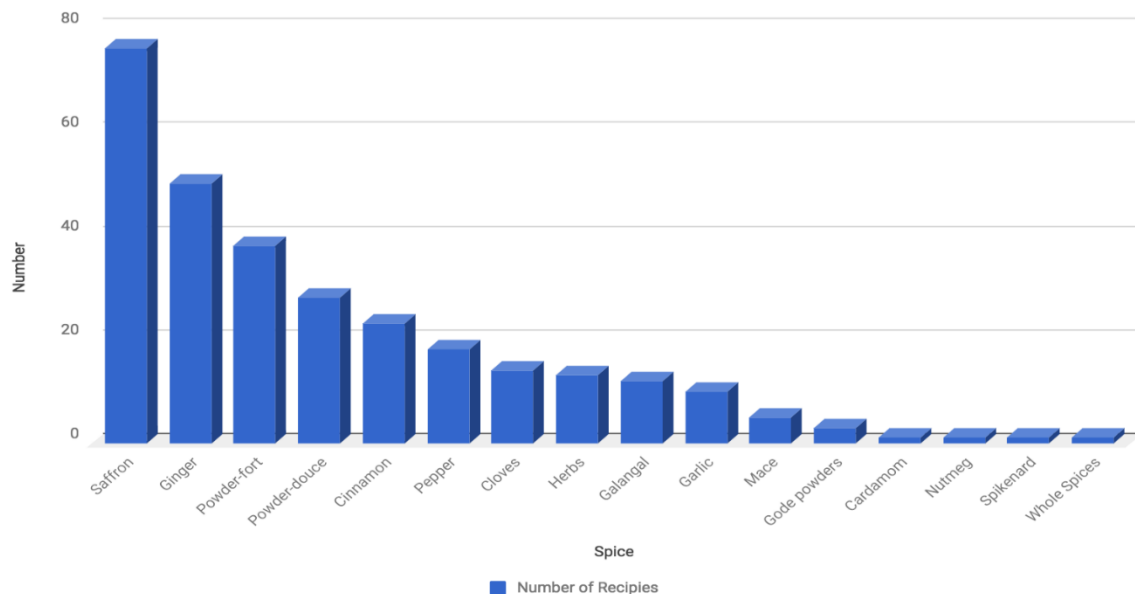


TABLE 15 - FORME OF CURY SPICE ANALYSIS 1390

Spice	Number	% of recipes
Saffron	76	38.78%
Ginger	50	25.51%
Powder-Fort	38	19.39%
Powder-Douce	28	14.29%
Cinnamon	23	11.73%
Pepper	18	9.18%

<sup>342</sup> ibid, p112

<sup>343</sup> Black, (1992), p66

<sup>344</sup> Pendrill, (1995), p195

<sup>345</sup> The spreadsheet with the analysis is available here

[https://docs.google.com/spreadsheets/d/1w8XUv\\_GlBiaKyg0WcV0ByXWiCXNz7An5RnFIQcz8xIw/edit?usp=sharing](https://docs.google.com/spreadsheets/d/1w8XUv_GlBiaKyg0WcV0ByXWiCXNz7An5RnFIQcz8xIw/edit?usp=sharing)

Cloves	14	7.14%
Herbs	13	6.63%
Galangal	12	6.12%
Garlic	10	5.10%
Mace	5	2.55%
Gode Powders	3	1.53%
Cardamom	1	0.51%
Nutmeg	1	0.51%
Spikenard	1	0.51%

There are 196 recipes, many using multiple spices; hence the total spice mentions will be more than the number of recipes. Spices occurred in most of the recipes, with only 23.98% not referring to any spices. Most of the non-spiced recipes were either desserts or simple dishes, but the presence of multiple spices in most of the recipes indicates that English Royal cuisine of that time was highly spiced. Some of the now common condiments, such as salt and sugar, were used, but they are not relevant for this analysis. Saffron was the spice used the most. Usually, saffron was added to provide aroma to the dish, rather than its more usual use as a colourant. Besides coloration and aroma, saffron was often sprinkled over the final preparation of the dish—as a sign that the dish was extremely expensive? Herbs were also used in cooking. As Scully mentions, John of Garland (1190-1270) had noted herbs such as sage, parsley, borage, leek, garlic, and onions, all grown in England.<sup>346</sup> Mustard, too, was used during these times, although the *Forme of Cury* does not mention it. Garlic and mustard were used by peasants and artisans, as they appreciated the strong flavours, while they could not afford expensive imported spices.<sup>347</sup>

Saffron was known to the Greeks and Romans. It was grown all over Southern Europe, and therefore England would have known it. It was imported from North Africa, the Middle East and Asia. Hakluyt reported that saffron arrived in England secretly, inside the hollowed-out staff of a pilgrim in 1339.<sup>348</sup> Thirsk also reports that saffron arrived during Edward III's reign (1327-1377) and was planted across England. Walden, as previously mentioned, was renamed Saffron Walden to reflect how much the town and its surrounding economy were based on saffron production (White, 1991). By the time these recipes were noted in 1390, it is quite possible that the saffron used was grown locally. It would certainly be cheaper than imported saffron. The other spice used significantly was ginger, usually in its powdered form. Preserved ginger was also known by this time, but mostly imported, hence perhaps the prevalence of powdered ginger. Emperor Domitian's *Edicts on Maximum Prices* from 301 AD mentions powdered and prepared (preserved) ginger (see previous chapter). The Romans used it extensively, having imported it from India, so it was well known in England. Gingerbread was also known.<sup>349</sup> Chaucer (1343-1400) mentions "*roial spicerye and Gyngebreede*."<sup>350</sup> Therefore, this spice appears to be common across the population and not exclusive to royalty, as it could be imported in powdered form (relatively cheaply) and could be grown inside the home where the frost would not affect the rhizomes.

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<sup>346</sup> Scully, (2005), p11

<sup>347</sup> Dyer, (2006)

<sup>348</sup> Thirsk, (2009), p6

<sup>349</sup> Hart, (1996), p12-19

<sup>350</sup> Toussaint-Samat, (2009), p29

The third most used spice was cinnamon, again in its powdered form, given the fragility of the bark, and was imported. The Crusades, which started in 1095 and went on for two centuries (until after this book was published), were most probably responsible for popularising the use of cinnamon and nutmeg from the twelfth century onwards. Adamson mentions how the tradition of adding dried fruits to poultry dishes and the use of mint sauce shows the connection of British cuisine to the crusades until today.<sup>351</sup> Adamson claims that these spices arrived as part of the crusader connection; however, as was shown, the Romans and their successors imported and used eastern spices long before the crusades. He mentions that it was regularly imported by this time, the Countess of Leicester (1215-75), King John's daughter, purchasing cinnamon six pounds at a time. Pepper was also used, sometimes several types, or called differently, such as Ethiopian pepper or grains of paradise, cubeb pepper, or long pepper from China and India. There was one recipe where whole spices (as opposed to the powdered form) were used, but it is not possible to comment if this was a special case or not. Gode powder and perro powder were also mentioned, but there is no information on form or content. These spices were used irrespective of whether sugar was used. The prevalence of the combined spice powders (powder fort and powder douche) is fascinating as well. Powders were not just used in isolation; they were used alongside other spices as well, and hence they can be at the base spice level. This use of combined spices is seen in many different cuisines, such as garam masala in Indian and harissa in North African cuisine; therefore, it was interesting to see that spice mixtures had such an old antecedent in England. There is no other information on this kind of powdered spice preparation due to the paucity of record keeping. The recipes are also not what one sees in current recipe books and on websites. There is no indication of weights and measures. There is no information on the heat or any additional nuances on how much browning one needs to undertake. The type of oil or frying agent is not explained—whether pig fat or olive oil or anything else. The spices were not fried or cooked separately as is the case now, they were added in as stated without any further preparation.

Spices were also used to marinate food. The cooking knowledge of that time was good enough to understand the concept of pre-preparing food by infusing spice aromas into the various meats. The recipes also showed a high prevalence of almonds and almond milk. Whilst the numbers were not tracked as part of this exercise, it was interesting to note the considerable number of recipes using almonds and almond milk, especially compared to the relative dearth of any kind of dairy products (cow milk, cheese, etc.) Almond use in these times is quite common, with evidence of extensive use across Europe.<sup>352</sup> However, this was a book by the Master Cooks to the King, and therefore the audience or readership was very wealthy: royal family members, aristocracy, and nobility, and the very rich merchant class. At this time and for many centuries after, kings and queens travelled frequently around their realm—either for military or civil purposes. They expected this kind of spicy cuisine around their country; hence it is logical to assume that this culinary form was common amongst the upper ranks of society. Given the cost (as shown in the previous chapter), it would have been rare that anybody below this top layer of society could have afforded such cuisine. This point was reiterated by Jennifer Ward, who talks about the sheer drudgery of homemakers and most of the population, who lived hand-to-mouth in the semi-urban and rural areas of England during the Middle Ages. In terms of cooking, meals were usually made from scratch

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<sup>351</sup> Adamson, (2004), p113

<sup>352</sup> *ibid*, p123

with local ingredients using limited cooking facilities—a diet that varied hugely according to the family’s economic circumstances.<sup>353</sup>

A special spiced wine with Roman provenance is Hippocras, mentioned in the *Forme of Cury*.<sup>354</sup> Hippocras, or Ypocras, was made and used well into the nineteenth century, after which it fell from favour. It is the forerunner of Spanish sangria, made with fruits and spices including cinnamon, ginger and pepper.<sup>355</sup> Hazlitt who wrote one of the first surveys of cookbooks, talks about how spices for ypocras were purchased by Henry VII on December 10<sup>th</sup>, 1497, on payment of six shillings and eight pence to Piers Barber (the spicer).<sup>356</sup> Elyot fulminates, in his book published in 1571, that spices were bad, complaining about foreign and British merchants bringing spices into the country “to content the insatiableness of wanton appetites”, a perspective that will be explored in the next section as well as in the next chapter.<sup>357</sup> Another author, Andrew Boorde, recommended spices positively for comforting the heart and approved of mace, ginger, nutmeg, cinnamon, cloves, cardamom, saffron and pepper.<sup>358</sup> While in Italy, as the Portuguese supply from India increased in the 1500s, Byrne reports that the general use of spices declined from 1520 onwards. He gives some statistics. Cristoforo Messisbugo’s 1549 collection of three hundred recipes showed an 82 percent use of spices such as cinnamon, saffron, pepper, ginger, cloves, nutmeg, mace, and coriander. Seventy-two percent of Giovanni del Turco’s recipes utilised similar spices.<sup>359</sup>

Hieatt and Butler review about twenty different manuscripts and fragments identified during the thirteenth and fourteenth centuries. Every manuscript shows a similar high degree of spice usage compared to the *Forme of Cury*. Whether it was from the time of Edward I or from the friars in religious orders, or in the households of Dame Alice de Bryne, Eleanor, Countess of Leicester, and Richard de Swinfield, Bishop of Hereford, this usage of spices is consistent. Interestingly, Hieatt and Butler say that the fourteenth-century recipes are plainer than later versions. Therefore, spice use, instead of reducing, seemed to be expanding, with the earliest recipes asking for 2-3 spices while later, this rises to 3-5 spices per dish.<sup>360</sup> Herbs are quite commonly used during this time, with John Harvey giving a list of vegetables consumed in the fifteenth century ranging from onions, leeks, worts, cabbage, broad beans, and peas, along with garlic and herbs such as parsley and hyssop for flavouring.<sup>361</sup> They were quite common, as Thirsk reports that a household book from 1511-25 contains an instruction that no herbs be bought as there is plenty in their lord’s garden.<sup>362</sup>

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<sup>353</sup> Ward, (2011), p63-73

<sup>354</sup> Anonymous, *The Forme of Cury*, (1390)

<sup>355</sup> Sim, (2013), p68

<sup>356</sup> Hazlitt (2012), p204

<sup>357</sup> Elyot, (1539), p24

<sup>358</sup> Thirsk, (2009), p14

<sup>359</sup> Byrne, (2017)

<sup>360</sup> Hieatt and Butler, (1985), p11-12

<sup>361</sup> Thirsk, (2009), p8

<sup>362</sup> *ibid*, p209

FIGURE 62 - BASTING BIRDS WITH SPICE BASED SAUCES (BLACK 1992)

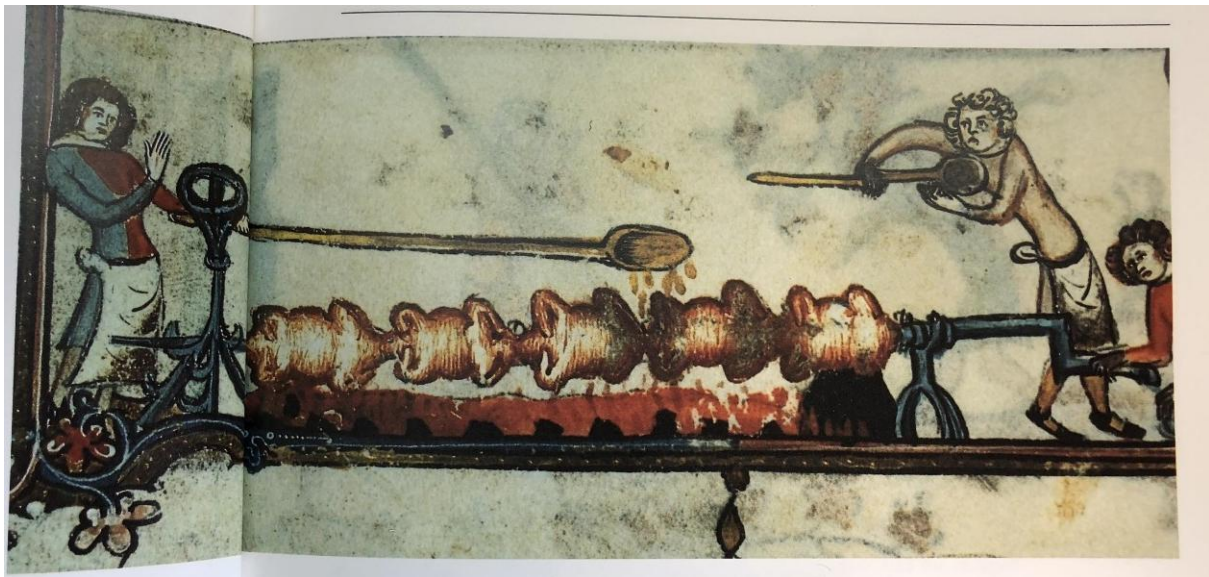


Figure 62 is an example of birds being basted as they roast over coals. Maggie Black gives this illustration from the Harleian Manuscript 279 of 1420 AD to accompany a recipe for spit-roasted or grilled steaks to which pepper and powdered ginger are added.<sup>363</sup> It is difficult to appreciate just how widespread the use of spices was, based upon recipe books. Literacy was very low in those times, and besides the royalty, aristocracy and religious orders, there were very few others who were literate enough to use recipe books.<sup>364</sup> Chaucer talks about spices in his unfinished *Cook's Tales* and refers to a cook from the Prologue to the *Canterbury Tales* in the Ellesmere Manuscript (early 15c) saying:

For boiling chicken with a marrowbone,  
Sharp Flavouring-powder and a spice for savour.  
He could distinguish London ale by Flavour,  
And he could roast and seethe and broil and fry,  
Make good thick soup and bake a tasty pie.

This shows that spices were used in a variety of dishes and spices/flavouring powders were to hand. To see other perspectives, it is useful to review artwork, especially paintings, which may show spices. Evidence is extremely sparse and not just in England; for example, Varriano reviews many drawings, paintings, still lives, and depictions of the '*Last Supper*' but does not identify any links to spices.<sup>365</sup> Similarly, a book that analyses food-related paintings in London's National Gallery does not identify any direct spice links.<sup>366</sup> Other books have analysed food in art in museums, such as in The Louvre<sup>367</sup> and Chicago's Art Institute<sup>368</sup>, but do not show any indication of spices in art relating to this period. Neither do other studies by Malaguzzi,<sup>369</sup> who studied western paintings for

<sup>363</sup> Black, (1992), p26

<sup>364</sup> Houston, (2002)

<sup>365</sup> Varriano, (2009), p94-117

<sup>366</sup> Riley, (1977)

<sup>367</sup> Bocuse and Pinard, (2009)

<sup>368</sup> Yoo, (1992)

<sup>369</sup> Malaguzzi (2008)



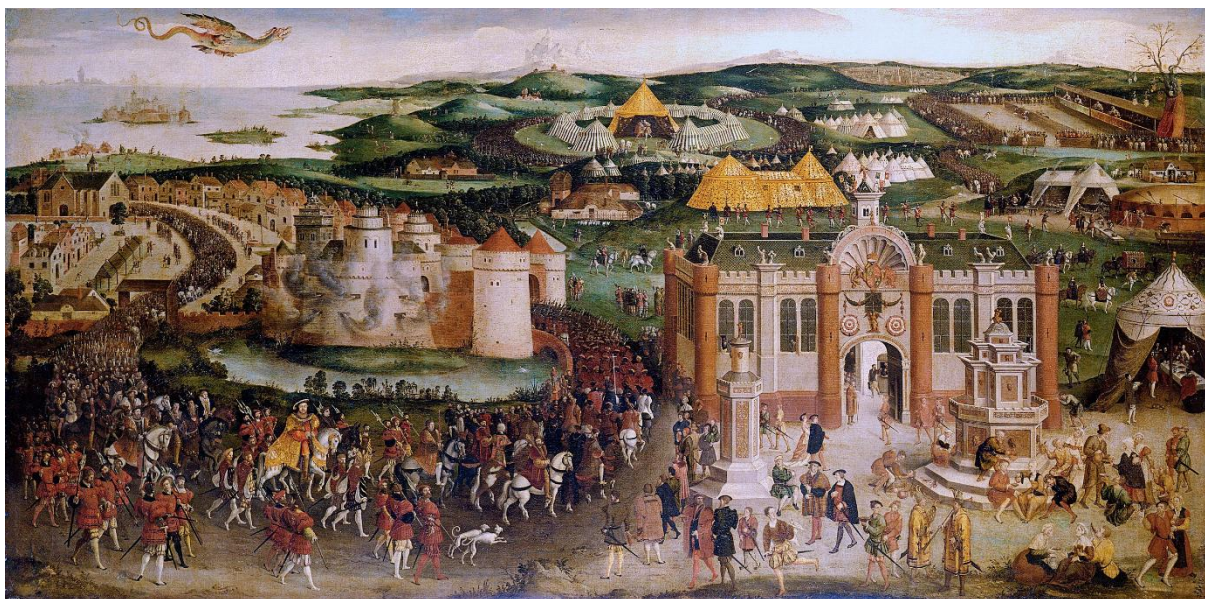
iconography, allegories, settings, dishware, and cutlery; nor Weintraub<sup>370</sup> who studied American paintings that focused on food. The Luttrell Psalter, dating back to the first half of the fourteenth century, contains 150 Psalms from the Old Testament.<sup>371</sup> The Psalms themselves are not relevant to this research; it is the illuminations that are of interest, as many depict contemporary life in fourteenth-century England, some of which relate to food.

FIGURE 63 - JEAN DE WAVRIN RECUEIL DES CHRONIQUES D'ANGLETERRE



Figure 63 from Jean de Wavrin's late fifteenth-century *Chronique d'Angleterre* shows the King of Portugal seated under his canopy of state with John of Gaunt, Duke of Lancaster, on his right-hand side.<sup>372</sup> The table is laid with knives, salts, bread, and trenchers. The servers are presenting poultry and small whole animals. The window on the left shows the kitchen clerk dressing the dish with the right sauce. These sauces were highly spiced. The image on the right shows Richard II at a feast, with a servant carrying a sugar sculpture of a ship.

FIGURE 64 - THE FIELD OF THE CLOTH OF GOLD, 1545



<sup>370</sup> Weintraub and Gustafson, (1990)

<sup>371</sup> Anonymous, (1320-1340)

<sup>372</sup> Wavrin, Jean de. (1470-80)





The Field of the Cloth of Gold is based in the then-English Pale of Calais that hosted a summit from June 7<sup>th</sup> to 24<sup>th</sup>, 1520, between King Henry VIII of England and King Francis I of France. This painting, in Figure 64, shows beehive ovens at the top right, with roasting spits under tents and finished dishes laid out on the serving tables. People were served wine with spiced cake.<sup>373</sup> One detail shows a cook standing in front of a pot, containing sauces, with the cook to his right serving the meat, again possibly with sauces. The estimated cost of food for the king, queen and nobles was £7,409 and the bill for the spices alone was £440.<sup>374</sup>

Spices were used extensively in the upper realms of society in the pre-1500 period, as reflected by the Roman antecedents (which heavily influenced European culinary traditions long after the collapse of the Roman Empire). This usage is seen in recipes, literature, and art representing the nobility and aristocracy (including minor nobility as well),<sup>375</sup> using spices as a means of showing off their wealth. Furthermore, it is apparent that socio-economic classes below this top level did not use spices daily, merely for special occasions with some exceptions such as spiced wine, ale or medicines.<sup>376</sup> Given this baseline, the next section explores the usage of spices in culinary pursuits in the 1500-1800 period.

### 3.3. Spices and Food – The Early Modern Period

From the spice perspective, the period of 1500-1800 was tumultuous. As Chapter 2 showed, the opening of the sea route to India and Indonesia by the Portuguese and its expansion by the Dutch and English EICs, amongst others, meant that the spice supply to England increased dramatically. Additionally, literacy improved;<sup>377</sup> tastes in literature and culture expanded, and printing of books (recipe books) increased exponentially,<sup>378</sup> family groups atomised, resulting in a significant increase in households with their own kitchens and an increase in discretionary spending capability. Greater flowering of religious efforts (partially due to an explosion of printing) also meant

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<sup>373</sup> Richardson, (2020), p146-48

<sup>374</sup> Sim, A. (2013)

<sup>375</sup> Swabey, (1998), p138-144

<sup>376</sup> Carlin and Rosenthal, (1998), p27-51

<sup>377</sup> Glasse, H. (1747)

<sup>378</sup> Maclean, V. (1981)

that various religiously mandated culinary practises, such as fasting and diets, had to be supported. Henisch details how such cuisine, frequently spiced, became common across England and Europe.<sup>379</sup> This section explores spice usage in England from a culinary perspective in early modern England.

A reiteration of the methodology used is worthwhile here. Albala recommends a methodology to review recipe books,<sup>380</sup> pointing out that what was written in the recipe books was rarely an accurate record of what people ate. These cookbooks were prescriptive rather than descriptive in nature. Even though these were not descriptors of actual practice, they provide a wealth of information. His proposed methodology is to tabulate ingredients and quantify them, if possible, to understand the ingredient usage. This can shed light on what ingredients were available, how popular they were, and what might not be used. He also mentions that cookbooks frequently excluded simpler dishes, such as vegetable dishes, because they were meant for wealthy readers or because these recipes were not impressive. This methodology is what has been used below.

### 3.4. Spices in Recipe Books

A selection of recipe books was analysed to determine the changes in cooking styles and ingredients over this period. The rationale for selecting the books is based on multiple factors. such as if they were published in multiple versions, indicating their popularity (based on WorldCat entry);<sup>381</sup> if they were referred to by other authors, indicating their importance or indeed plagiarised by others; and if they appeared in a list published by the British Library in a study aimed at indicating how British cuisine evolved over time.<sup>382</sup> The audience was aimed at educated, literate people, mainly women. These women would normally be the ladies of the house initially, who will review, write and create recipes (both food and medicine) and then instruct the cook/butler on what should be cooked when. Literacy increased over this period and thus the audience of the recipe books increased as well. Later in the period, migration increased, and single, newly established households in the cities became the norm. Newly married literate women were expected to manage the household, including the kitchen, these recipe books would be essential information for them.

The sixteenth century saw trade with the Portuguese following the opening of the sea route to Asia and with Spaniards to the Americas considerably expanded. From the late 1500s onwards, the Dutch and British also started opening their own sea routes, thereby increasing the availability of previously unknown ingredients and condiments. The first known book relevant to this time is *A Noble Booke of Festes Royalle and Cokery. A booke for a Pryncis Housholde or any other Estaes* in 1500.<sup>383</sup> *The Booke of Keruyng* (The Book of Carving), printed in Fleet Street by Wynkyn de Worde in 1508, was one of the first household books to be published.<sup>384</sup> The book is aimed at butlers and staff in charge of pantries rather than being a recipe book. This obviously means that it is only aimed at people employing butlers and maintaining a complex set of household staff, including persons dedicated to looking after the pantry. The instructions within the book range from how to

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<sup>379</sup> Henisch, (1976), p24-27

<sup>380</sup> Albala, (2013), p114-21

<sup>381</sup> <https://www.worldcat.org/> accessed 28 August 2019

<sup>382</sup> <http://www.bl.uk/learning/langlit/texts/cook/cookery2.html> archived at <http://www.webcitation.org/73zZFS1Kk> accessed 17 Nov 2018

<sup>383</sup> Thirsk, (2009), p11

<sup>384</sup> Anonymous, (1508)

dress his lordship, how to keep the salt white and dry on the table, how to ensure the table has been set, how to convey the soups, meats, and sauces from the sideboard to the table, and how to warm the shirt of his lordship by the fire. It also talks about what to do if your lordship has over-imbibed and how to carve meat. While the book talks about what should be served with what, such as mustard to accompany pork, garlic, mustard, pepper, or ginger sauce to accompany ribs of beef; salt and cinnamon with sparrows and thrushes, it relates more to the services rather than cooking; therefore, this book was not considered for analysis.

Intermittent issues around crop failure and food security meant that sumptuary regulations were frequently promulgated. For example, the Sumptuary Regulations of May 31<sup>st</sup>, 1517, during the reign of Henry VIII, state that a cardinal may have nine dishes at one meal, a duke/archbishop/marquis, etc. may have seven, mayors and others six and so forth, presumably an attempt to control the amount of feasting.<sup>385</sup> In 1543: *"A great mortality happening among the cattle in 1543, a sumptuary law was made ... to restrain luxurious feasting: ... lord mayor should not have more than seven dishes at dinner or supper....; upon penalty of 40 s."*<sup>386</sup> Whilst these regulations were being promulgated, it remains unclear if they had an impact, as the cookbooks remained as rich as ever with recipes and serving suggestions.

The Star Chamber dinner menu, where the Privy Council met during the reigns of Queen Elizabeth I and King James I, shows that the food was extraordinarily rich and wide-ranging. Dinner, on Friday April 30th, 1591, was on a fasting day (hence fish), including oysters, ling, salt salmon, green fish, great pike, smaller pikes, great carp, smaller carps, bream, tench, great roasting eels, knobbards, perch, trout, flounder, barbels, chevins, chubs, sole, crayfish, plaice, pearls (a variant of brill), gurnards, prawns, lobsters, crabs, mackerel, whiting, fresh salmon, and a chine of salmon, as well as herbs, cream, pounded butter, apples for tarts, eggs, oranges and lemons, barberries, rose water, quinces, and other fruit. Dinner on Wednesday, January 26th, 1591/92, was a normal non-feast dinner comprising oysters, beef, bacon, neat's tongues, mutton joints for boiling and roasting, veal joints for roasting and for pies, suet, marrow bones, seam (lard), lamb, capons, turkey, pullets, partridges, mallards, teals, woodcocks, plovers, snites, larks, rabbits, herbs, eggs, butter, cream, apples for tarts, oranges, lemons, fruit, rosewater and barberries.<sup>387</sup>

A short volume by an unnamed author titled *"A proper new Booke of Cookery. Declaring what maner of meates be best in season for all times of the yeere, and how they ought to be dressed, & served at the Table, both for fleshe dayes and Fish daies. With a new addition, very necessary for al them that delight in Cookery"* was first published in 1575 and includes recipes for cooking, covering meats, broths, pies, tarts, jellies, etc.<sup>388</sup> Most of the recipes have common spices such as ginger, pepper, cinnamon, nutmeg, and mace. A rather interesting recipe for a pudding in a turnip root involves hollowing out a turnip and then filling it with sugar, cinnamon, ginger, hard egg yolks, claret wine, butter, vinegar, rosemary, mace, and dates. Another recipe is more common: *"To make Vautes. Take the kidney of Veale, and parboyle it till it be tender, then take and chop it small with the yolkes of three or fouer Egges, than season it with dates small cut, small raysins, ginger, suger, cinnamon, saffron, and a litle salt, and for the paste to lay it in, take a dosyn of Egges both the white and the yolkes, and beate them well altogether then take butter and put into a fryinge pan and frye*

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<sup>385</sup> Baldwin, (1931), p216

<sup>386</sup> Kirtio, (2012), p17-29

<sup>387</sup> Simon, (1959)

<sup>388</sup> Anonymous, (1575)

*them as thinne as a Pan- cake, then lay your stuffe therin, and so frye them toghether in a panne, and cast suger and ginger upon it, and so serve it forth.*"<sup>389</sup>

John Partridge authored another book in 1585, focusing on medicinal recipes but also including food recipes. The author mentions stews with salt and pepper. Despite the book stressing being economical with procedures and ingredients, the author uses spices regularly and provides a recipe for cake with flavourings of cloves, mace and saffron. Another anonymous book published in 1588, titled *"The good hous-wiues treasurie. Beeing a verye necessarie booke instructing to the dressing of meates. Hereunto is also annexed sundrie holsome medicines for diuers diseases,"* had a similar structure with its focus on medicinal instructions. It includes a beef broth flavoured with mace, pepper, and salt, along with herbs.<sup>390</sup>

The first book analysed in detail in this section reflects this change and is similarly titled *"The Good Hufvwives Jewell"* authored by Thomas Dawson in 1585.<sup>391</sup> It contains 148 recipes relating to cooking and preserving. Another thirty recipes are medicinal. The medicinal recipes will be analysed in Chapter 4. The fact that a book was printed and published for the average person, aimed at housewives as can be noted by the title, indicates that there was an emerging market for cookery books. The demand was high enough to warrant a second edition in just one year. It also indicates that women were now literate enough to use an English language book to cook and prepare medicines. This also shows that social traditions were changing, which necessitated the need for a book setting out the expectations of the housewife when cooking and providing for her family and preparing medicines. Variety was expected, and not just a small set menu. For meat and poultry stuffing, Dawson recommends using thyme, hyssop, and parsley, mixed with egg yolk, white bread, raisins or barberries, and spices including cloves, mace, cinnamon, and ginger, all in the same dish. A sauce for pork was prepared with white wine, broth, nutmeg, and the herbs rosemary, bay leaves, thyme, and marjoram. The ingredients listed are broad enough to show that the supply chain across England was improving. This book includes a recipe for sweet potatoes, indicating that the great Columbian Exchange was in full flow. Sweet potatoes were only found in the Americas, and it was after Columbus opened the route that these vegetables started to arrive in Europe in sufficient quantities so as not to be considered exotic and common enough to warrant a recipe.

The book provides more prescriptive recipes compared with earlier cookbooks, which did not offer sufficient details about the quantity of ingredients or cooking styles. For example, we see directions for using four yolks or a handful of parsley. The recipes also provide some direction on boiling, stewing, pickling, etc. Some of the recipes even refer to temperature, a new trend, "let them seeth a quantitey of an houre"<sup>392</sup> or "let the fire be verie soft, and when the one side is baked, then turn the other, and bake them as dry as ye can without burning".<sup>393</sup> Dawson provides a handy list of all items required for a banquet, including sugar, cinnamon, liquorice, pepper, nutmeg, saffron, coriander, pomegranates, damaske water, lemons, prunes, dates, currants, raisins, cherries, blackberries, ginger, white and brown pepper, cloves, mace, etc.<sup>394</sup> This formulation and publication began to set expectations on what a common housewife should have in her larder and spice

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<sup>389</sup> Partridge, (1585)

<sup>390</sup> Anonymous, (1588)

<sup>391</sup> Thomas Dawson, (1585)

<sup>392</sup> *ibid*, p5

<sup>393</sup> *ibid*, p41

<sup>394</sup> *ibid*, p23

cupboard when entertaining. The book also suggests, for the first time, the order of service.<sup>395</sup> While the order of service had always been noted, for example, offering fish before meat, sweetmeats before meat, it was more observed as a localised tradition in the relevant abbey, monastery, manor house, or royal household. Now that it was mentioned in a cookbook, this order of service became a tradition that was more widely observed. It is also interesting to note how the main ingredients are addressed. Unlike modern recipes, where chickens or ducks are impersonally addressed as “it”, Dawson refers to items in the first and second person, such as, *“Take a good Capon and fealde him and truffle him and when he is faire washed put him in your pot...”*<sup>396</sup> Verjuice - a highly acidic juice made by pressing unripe grapes, crab apples or other sour fruit along with lemon juice, herbs and spices- is mentioned liberally in many recipes. It is used to make sauces or as a condiment. Dawson differentiates between ground and whole spices, sometimes recommending whole peppercorns or whole mace versus ground spices. There does not seem to be any basis around when ground or whole spices are used. The only assumption possible is that whole spices were easier to remove during eating. Dawson mentions a powder called ‘blanch powder’, used to make Marie Pies.<sup>397</sup> It is a generic spice blend, meaning white powder and a typical recipe from another contemporary author is: *“...Ginger is hot in the second degree, and dry in the first. It is the root of a certaine herbe,\* as Galen writeth. It heateth the stomacke, and helpeth dige|stion, and is good for the sight. For this experience I have of ginger, that a penny weight thereof together with three penny weight of white sugar both made very small in powder and •earsed through lawne or a fine boulder cloth, and put into the eie,\* hath within short time worne away a flegme growne over the eie: also with two ounces of sugar, a quarter of an ounce of ginger, & half a quarter of an ounce of Cinamon, al beaten smal into powder, you may make a very good blanch powder, to strow upon rosted apples,\* ... But that ginger which is called greene ginger, or ginger Condite, is better for students: for being well made, if it be taken in the morning fasting, it comforteth much the stomacke and head, and quickneth remembrance, and is very good for a cough.”*<sup>398</sup>

This interaction of spices with medicine will be explored further in the next chapter. The book includes an extraordinarily high number of recipes with sugar, indicating that sugar supply had increased compared with previous centuries. This could include the supply of sugarcane as opposed to beetroot sugar. Currants also appear in the book, which was quite rare earlier. Butter is used in many recipes, which was uncommon earlier; similarly, cows’ milk is to an extent not observed earlier. However, almond milk, quite common in the *Forme of Cury*, is rarely mentioned.

Dawson’s book can also claim to be the first providing the recipe for gammon with cloves, a common Christmas dish in modern times: *“Take a Gammon of Bacon, water it fire bayes and perboyle him half enough and lay him in pess and then take the twowe of him and stuff him with cloves, and season him with pepper, and saffron, and close him in a stranding pye, bake him and so serue him”.*<sup>399</sup>

Dawson introduces the modern concept of seasoning with salt and pepper, though the modern injunction of resting is not mentioned. Frequently, seasoning is not just with salt and pepper but adds ground cloves and mace. In a recipe for baking chicken, Dawson recommends seasoning

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<sup>395</sup> ibid, p2

<sup>396</sup> ibid, p6

<sup>397</sup> ibid, p12

<sup>398</sup> Cogan, (1612), p126

<sup>399</sup> Dawson, (1585), p13-14

with sugar, cinnamon, and ginger, again a first as far as one can make out.<sup>400</sup> This would render the meats or birds quite spicy. In a recipe to bake red deer, there would appear to be the first mention of bay leaves being used as a spice in England.<sup>401</sup> Bay leaves originated in Southeast Asia and were grown in warmer climes such as the Mediterranean. They were used in Ancient Greek and Roman cuisine and considering their slight toxicity, it is interesting that they were considered as a spice in England by this time.<sup>402</sup> While the recipes are indeed spiced, they are usually lightly spiced, with directions to use a little mace or pepper, rather than greater amounts of spice, which was an indication of wealth and would not be applicable to lower- and middle-class housewives doing their own cooking or best having a kitchen maid to help. Moreover, the other way of referring to spices is for the recipe for *Oifler Chewets* (a food made from minced meat or fish combined with fruit and spices and either baked, boiled, or fried), where Dawson recommends a pennyworth or half a pennyworth of various spices.<sup>403</sup> In another recipe, for quince syrup, he recommends spices by weight: a weight of fine groats of cinnamon and pepper.<sup>404</sup>

The book also has fewer recipes for sauces. In the *Forme of Cury*, many dishes had sauces, but in Dawson's book this is reduced, with the dish standing on its own. Saffron use also reduced, and interestingly, saffron seems to be more for flavour than the colouring shown in the *Forme of Cury*. In a recipe for hypocrase or spiced wine, in addition to common spices such as cinnamon, ginger, mace and cloves, he recommends adding long pepper, galangal, grains of paradise, and cubeb pepper. Furthermore, he specifically notes that the spices should not be bruised and only to bruise them (to release the flavour) at the time of preparation. In other words, they should have been transported and stored with care during the long journey from overseas to the spice cupboard. Given the logistical challenges of keeping spices unbruised, this means that only the finest quality was to be used, which was extraordinarily expensive, as these spices were certainly not commonly available in England. Given that these special wines were highly valued as a gift and only used for special occasions, one suspects they were used infrequently.

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<sup>400</sup> *ibid*, p16

<sup>401</sup> *ibid*, p15

<sup>402</sup> Peter, (2001), p89-114

<sup>403</sup> Dawson, (1585), p33

<sup>404</sup> *ibid*, p34

FIGURE 65 - THE GOOD HUFVIVIFES JEWELL, THOMAS DAWSON, SPICE ANALYSIS- 1585

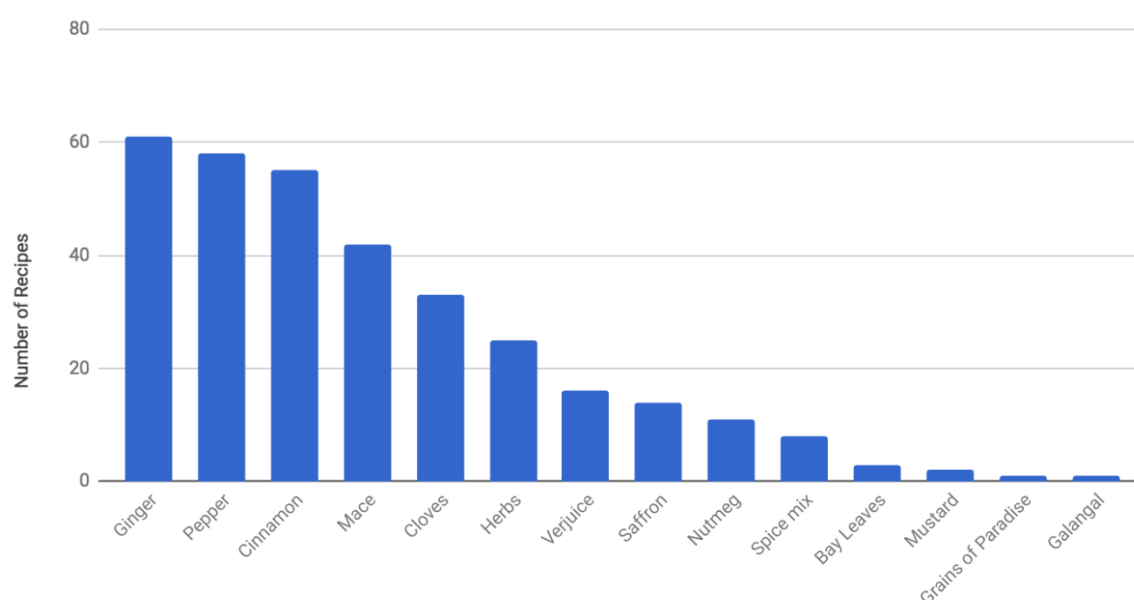


TABLE 16 - THE GOOD HUFVIVIFES JEWELL, THOMAS DAWSON, 1585 SPICE ANALYSIS

Spice	Number	Percentage
Ginger	61	41.22%
Pepper	58	39.19%
Cinnamon	55	37.16%
Mace	42	28.38%
Cloves	33	22.30%
Herbs	25	16.89%
Verjuice	16	10.81%
Saffron	14	9.46%
Nutmeg	11	7.43%
Spice Mix	8	5.41%
Bay Leaves	3	2.03%
Mustard	2	1.35%
Grains Of Paradise	1	0.68%
Galangal	1	0.68%

Following the same methodology used for the *Forme of Cury* book, each recipe was analysed to determine if spices were used. If a spice was used more than once at different stages of the recipe, it was counted just once.<sup>405</sup> Figure 65 and Table 16 show a very distinctive change in the types of spice most used. Compared to the *Forme of Cury*, non-spiced recipes dropped by 23 percent to 40 percent of the recipes, meaning that most recipes (60 percent) were spiced. Ginger and pepper replaced saffron as the main spice; ginger moved up the list, and spice mix dropped below the top five, while in the *Forme of Cury*, the two powders (powder fort and powder douce) were fourth and

<sup>405</sup> The full table of analysis is available here:

<https://docs.google.com/spreadsheets/d/1ER3njSPxc3pBj1MYMXTvutljUadCCpOmsIU-7Nbyo9w/edit?usp=sharing>



fifth, respectively. Interestingly, cardamom, present in the *Forme of Cury*, is missing from Dawson's book.

The Elizabethan era had heavily spiced food. Wright mentions how gingerbread was made by mixing breadcrumbs into a paste with honey, pepper, saffron, cinnamon and ginger, then decorating it with box leaves impaled on cloves.<sup>406</sup> A dish of a thick paste of sugar, spices, wine, and dry fruits on toasted white bread was popular; buns made with eggs and spices were a treat; buttered loaves enriched with sugar, butter, egg yolk and various spices were common. Another anonymous book published in 1594 titled *The Good Huswives Handmaide for the Kitchin* showed that food was quite highly spiced, and these spices were bought freely from shops in London.<sup>407</sup>

A work by an Italian author, *The Italian Banquet* was translated into English in 1598, though it had many recipes not understood by the English housewife, such as references to pasta, frequent use of cheeses in cooking and recipes for dried meat, difficult to achieve in the usually wet and cloudy English conditions.<sup>408</sup> One interesting recipe was for mustard balls, which could be dried and carried around as a ready flavouring for meals.<sup>409</sup> Given the lack of mustard mentioned in the cookbooks of this age, it is unclear how much this recipe was taken up. Another book, published by Henry Buttes, was called *Dyets Dry Dinner*.<sup>410</sup> It does not include recipes as such but lists the author's likes and dislikes about a variety of food elements such as fruit, vegetables, herbs, and spices. The spices he reviews are pepper, Piper, Cinamon, Cinnamomum, Clowes, Garyophylli, ginger, Zinziber, Nutmegges, Nux Myristica, saffron, Crocus, Sugar, Saccarum, Honny, Mel.<sup>411</sup> It is to be noted that he considers sugar and honey as a spice. The entry for Nutmegge is instructive in how he classifies the spices:

Choise: New: not rotten: weightie. Full of iuyce and oyle: the colonr inclining to red.  
Vse. Mendeth a strong breath: talketh away pimpels: comforteth the sight: stomacke:  
    spleane, and belly: prouokes vrine.  
Hurt. Bindeth: and therefore, hurteth such as haue the Haemorhoids, are costieue, or  
    melancholicke.  
Correction. Vse it sildome, moderately, and with a litle ginger.  
Degree. Season. Age. Constitution.  
Hot and dry, in the ende of second.  
In winter, for very olde folkes. full of leame.

The description is systematic and detailed, that explains the use of various food items under different headings and bearing out the thesis, which will be explored in the next chapter, that food was medicine and spices were an integral part. Their use was explained in terms of illnesses, how to judge quality, how to apply them and to whom.

The next relevant book during this period is a recipe and household hints' book by Sir Hugh Plat titled *Delightes for Ladies*.<sup>412</sup> A successful book of its time, as some early editions were

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<sup>406</sup> Carlin and Rosenthal, (1998), p102-03

<sup>407</sup> Anonymous, (1594)

<sup>408</sup> de Rosselli, (1598)

<sup>409</sup> Thirsk, (2009), p.33

<sup>410</sup> Henry Buttes (1599)

<sup>411</sup> The pages are not numbered, the book is laid out in the form of an encyclopaedia and arranged alphabetically.

<sup>412</sup> Plat, (1602)

reprinted. Its full title is *Delightes for ladies: to adorn their persons, tables, closets, and distillatories with beauties, banquets, perfumes, and waters*. In the preface the author guides the ladies, mentioning how he will explain the usage of spices such as nutmegs, cloves, and mace at the bottom of the page, listing recipes such as cinnamon water and various ginger-related items such as gingerbread, ginger in rock candy, ginger green in syrup, candied ginger; nutmegs in rock candy and candied nutmegs; spirits of spices, besides using spices fairly copiously in all recipes. He offers recipes for preserving, such as one to make clove or cinnamon sugar: “*Lay pieces of fugar in clofe boxes amongft fticks of cinamon, cloves, &c and in a fhort time it will purchafe both the tafte & fent of the fpice. Probat. in cloves*”.<sup>413</sup> Another example of a spice-specific recipe is for: “*Spirits of fpices - Diftill with a gentle heat either in Balneo, or afhes, the ftrong and fweete water, wherewith you have drawne oyle of cloves, mace, nutmegs, juniper, rofemary, &c after it hath ftood one moneth clofetoft, and fo you fhall purchafe a moft delicate Spirit of each of the faid aromaticall bodies*.”<sup>414</sup> Wall says that Plat’s view was that spices constitute gross mass bodies that can be transformed into delicate spirits. He also mentions the use of Amber-greece (Ambergis) and Muske (Musk), two of the most expensive substances, even more expensive than saffron.<sup>415</sup>

In the next section, he mentions distillation, and recipe #10, a very complicated recipe, almost like a chemistry experiment, is for cinnamon-water.<sup>416</sup> He also talks about distilling the essences of herbs such as thyme, lavender, and rosemary. These are not just liquids but also salts of herbs. The following sections are for cookery and housewifery, where most of the recipes include some form of spice ranging from pepper, nutmeg, mace, cloves, cinnamon, and herbs. Many recipes are international, such as “*To boile Pigs-petitoes on the French Fafhion*” and “*To boile a leg of Mutton after the French fafhion*”.<sup>417</sup> An interesting recipe for Muftard Meale (portable mustard - which allows people to carry mustard on their travels) is also given with some vehement words, and that too from Venice: “*It is ufually in Venice to fell the meale of muftard in their markets, as we doe flower and meale in England : this meale, by the addition of vineger, in two or three dayes becommeth exceeding good muftard; but it woul dbe much ftronger and finer, if the huskes and huls were firft divided by fearce or boulder; which may eafily be done, if you dry your feeds againft the fire before you grinde them. The Dutch iron handmils, or an ordinary peppermill, may ferve for this purpofe. I thought it very neceffary to publith this manner of making your fawce, becaufe our muftard, which we buy from the chandlers at this day, is many times made up with vile and filty vineger, fuch as our ftomacks would abhorre, if we fhould fee it before the mixing thereof with the feeds*”.<sup>418</sup> The remainder of the book relates to medicinal, confectionery, and household tips (such as how to perfume gloves), indicating that by 1632, spices were spreading across the country, pointing to an increase in supply from the EIC, which had started to have an impact.<sup>419</sup>

*Elinor Fettiplace’s Receipt Book*, written in 1604, corroborates this finding, albeit based on a receipt book which is not a public document.<sup>420</sup> One can see that the number of spices mentioned in the book is as frequent as in Plat’s book, above. Elinor Fettiplace, a rich heiress,

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<sup>413</sup> Ibid, p84

<sup>414</sup> Ibid, p90

<sup>415</sup> Wall, (2010)

<sup>416</sup> Plat, (1602), p10

<sup>417</sup> Ibid, p7, 10

<sup>418</sup> Ibid, p25

<sup>419</sup> Wright, (2011)

<sup>420</sup> Fettiplace and Spurling, (1987)

married into one of the ancient Norman families and lived in Appleton Park, in what is now Oxfordshire (formerly in Berkshire), in a large country home, hence, she was at the top of the socio-economic order, and one expects her economic conditions to be such that spending on spices was not a hardship. Her receipt book contains, as was usual during those times, not just recipes but also animal husbandry, household tips and medicinal recipes. There is no classification, and all recipes, whether for serving dishes, preservation, medicines for her family, perfumes, or animal husbandry, are all mixed. She uses spices, such as the following recipe for a Spanish marmalade including cinnamon: *“Take five sponfulls of rose water and seaven sponfulls of suger finely beaten, make yt boyle you must have redy by you two handfulls of almondes blanchd and finely grownd, with 15 or 16 dates ye stones and whights taken out, and yor dates cut smale and beaten in a mortar, then mixe yor dates and almondes well together, then put yt in your Sirrope stirring yt well together, then take on sponfull of powder of sinamond, halfe a sponfull of ye powder of pearles, three sheetes of Golde, stirr all theise well, but you must take yt first from the fire or else yt will bee to stiff that you can-not mingell yt, before yt bee through cold put yt upp into a marmalad boxe”*<sup>421</sup> She follows Sir Hugh Plat’s recipes in many ways, using oranges, and making candied fruit. Another recipe for mutton is as follows: *“Take a showlder of mutton and being halfe Roasted, cut it in great slices and save the gravie then take Clarret wine and sinamond [cinnamon] & sugar with a little cloves and mace beatne and the pill [peel] of an oringe Cut thin and minced very smale. Put the mutton the gravie and these thinges together and boyle yt betweene two dishes, wringe the Juice of an oringe into yt as yt boyleth, when yt is boyled enough lay the bone of the mutton beinge first Broyld in the dish with it then Cut slices of limonds and lay on the mutton and so serve yt in.”*<sup>422</sup> The final example is of how much spices were used is Elinor’s recipe for a cake. *“Take a peck [twelve and a half pounds] of flower, and fower pound of currance, one ounce of Cinamon, half an ounce of ginger, two nutmegs, of cloves and mace two peniworth, of butter one pound, mingle your spice and flowre & fruit together, put as much barme [fresh yeast] as will make it light, then take good Ale, & put your butter in it, all saving a little, which you must put in the milk, & let the milk boyle with the butter, then make a posset [a spiced drink of hot milk mixed with alcohol] with it, & temper the Cake with the posset drink, & curd & all together, & put some sugar in & so bake it.”*<sup>423</sup> These heavily spiced cakes were made for feast days or for major family celebrations.

It is surprising that the serious food and cereal shortages and issues around food supply from 1586 onwards to about 1650 do not show up in the cookbooks, with harvests failing regularly.<sup>424</sup> It is conceivable that the cookbooks were plagiarised from previous books published during better times or were meant for rich people living on the coast or in cities, such as London, where imported food was available. Despite this, some evidence that food supply issues were noted comes from James Hart, who published a healthy diet book in 1633 called the *Klinike, or the diet of the diseased*, and mentions how people boiled cats with their pottage.<sup>425</sup> Hugh Platt published a book in 1596 talking about foods that could alleviate hunger called *Sundrie New and Artificall Remedies against Famine*.<sup>426</sup> His next book, published in 1602, called *Delightes for Ladies*, did not refer to the famine and talked about what a housewife would encounter, written in a conversational

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<sup>421</sup> *ibid*, p24

<sup>422</sup> *ibid*, p10

<sup>423</sup> *ibid*, p14

<sup>424</sup> Thirsk, (2009), p61

<sup>425</sup> *ibid*, p79

<sup>426</sup> *ibid*, p81

manner. The book was quite popular, with several, almost annually, editions until 1656. Greivase Markham's book, *The English Huswife, Containing the Inward and Outward Virtues Which Ought to Be in a Complete Woman*, was published in 1615.<sup>427</sup> This book was not selected for detailed data analysis, as it has a comparatively lower number of food recipes and a cross-sectional approach to recipes, household tips and medicines. Even at this early juncture, Markham assumes that the English housewife of his day had access to herbs, spinach, asparagus, lemons, oranges, capers, currants, spices, and olives. The book is written and laid out in a unique way from the previous books, which were usually in sections, with recipes one after another, or completely mixed up. His book lists the topic of the entry (recipe or household tip) in a paragraph without a section heading, the title printed in italics in the left-hand side margin, like an accounting book. There are five chapters, relating to *Household Physicke, Skill in Cookery, Of Woolle, Hempe, Flaxe and Cloth, Of Dairies, Butter, Cheese, and Of the office of the Brew-house, and the Bakehouse*. Another reason why this book was not selected, is because Markham himself admits in the preface, "this is no collection of his whose name is prefixed to this worke, but an approved Manuscript which he happily light on, belonging sometime to an honorable Personage of this kingdome, who was singular amongst those of her ranke for many of the qualities here set forth".

While the book title says it is for the housewife, given that female literacy at that time stood at about 5-10 percent, it is perhaps aimed more at a male readership.<sup>428</sup> Written in an informal style, the spice usage is clear across the cookery chapter, although not as prevalent as in the prior books. Here is an example of a pancake: "*The beft Pancake: To make the beft Pancake, take two or three Egges, and breake them into a difh, and beate them well: then adde vnto them a pretty quantitie of faire running water, and beate all well together: then put in Cloues, mace, Cinamon, and a nutmeg, and feafon it with Salt: which done, make it thick as you thinke good with fine Wheat flower: then frie the cakes as thin as may be with fweete Butter, or fweete Seame, and make them brone, and fo ferue them vp Sugar ftrowed vpon them. There be fome which mixe Pankes with new Milke or Creame, but that makes them tough, cloying, and not for crispe, pleafant and fourie as running water.*"<sup>429</sup> The strictures against dairy are noticeable. Spices are common and in large amounts—a full nutmeg was dropped in what would be a recipe for a single person which would render it an expensive dish. There are numerous pottage recipes using, perhaps more than usual, herbs rather than spices, which could indicate that herbs were starting to take over from spices. On some pages, the spices are italicised to highlight them. Besides the spices, other items such as raisins, butter, lemons, and oranges are also italicised. This may be to highlight their expense or the fact that it was vital for the recipe; however, it is unclear why this is so. The herbs are not highlighted but are important in the recipes.

Other books published during this period, such as John Murrell's two books in 1617, *A New Booke of Cookerie*<sup>430</sup> and *Daily Exercise for Ladies and Gentlewomen*,<sup>431</sup> were aimed at the English audience wanting to know about international cuisine from France, Italy, and the Netherlands rather than domestic cuisine. His 1621 book on *A Delightfull Daily Exercise for Ladies*

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<sup>427</sup> Markham, (1615)

<sup>428</sup> URL:<http://www.bl.uk/learning/langlit/texts/cook/1600s2/countryh/country.html>. Accessed: 2018-01-14. (Archived by WebCite® at <http://www.webcitation.org/6wSYUfpg>)

<sup>429</sup> *ibid*, p66

<sup>430</sup> Murrell, (1617a)

<sup>431</sup> Murrell, (1617b)

and *Gentlewomen*, focussed more on exercise with only a small chapter on cooking.<sup>432</sup> Lehmann analyses the English recipe books and finds that there were 13 recipes out of 767 between 1545 and 1594 marked as French.<sup>433</sup>

*The Ladies Cabinet Opened*, by Patrick Ruthven, published in 1639, was written to address the requirements for preserving and conserving rather than cooking. The second related book from 1653, by Patrick Ruthven's widow, Elizabeth Grey, Countess of Kent, is titled *A true Gentlewoman's delight*, with quite a lot of overlap, repetition and commonalities with her husband's book published three decades earlier.<sup>434</sup> Women in the early seventeenth century had clearly started to show that they could be literate, own businesses and drive economic activity, frequently associated with cookery, such as innkeeping, shopkeeping, selling drinks and food, etc.<sup>435</sup> As Weatherill shows, for example, women owned as many books as men did. The study compared the probate inventories of 2902 people, out of whom 15 percent were women. Most were middle-ranking tradespeople, lesser gentry and from English counties such as Durham, Cumbria, Hampshire, Lancashire, and Kent. The crucial factor was that the books were owned by 19 percent of men as well as women in the sample. London men and women owned a far higher proportion of books (36 per cent and 28 percent respectively), closely followed by Kent. Other rural areas had lesser proportions, indicating the difference in literacy.<sup>436</sup> The 1653 publication of the English translation of the seminal French cookery book by Francois Pierre de la Varenne, *Le Cuisinier Francois*, is perhaps the start of the steady increase of French influence on English cooking.<sup>437</sup> Lehmann reports that after the publication of La Varenne's book – there was a small increase in French recipes in the English cookbooks, with roughly 10-12 French recipes included, such as the inclusion of sweetness into English cuisine.<sup>438</sup> A complex matter, but generally French cuisine was known somewhat in the earlier times, but as explored later in this chapter-there was a growing antipathy towards complex French cuisine, which led to the reduction of the use of spices.

The third book to be analysed<sup>439</sup> is *The Accomplisht Cook* by Robert May, first published in 1660.<sup>440</sup> This book went into five editions, showing its popularity. For the first time, it included recipes from Italy and France. The last and most popular fifth edition is reviewed hereunder. The book was aimed not just at the upper classes, but also at the middle or even the lower socio-economic classes, as he includes simple, cheap recipes for porridge and sausages, suitable for any class. The author spent time in France and Italy becoming familiar with their cuisine. He provides a fascinating view of how Stuart times looked, as far as food is concerned. The book, for the first time in the history of recipe books in the English language, has different sections ranging from boiling to fruit to puddings, to eggs, ending with two sections on the diet for the sick and feeding poultry. Also, for the first time, the book includes more than two hundred illustrations of the

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<sup>432</sup> Murrell, (1621)

<sup>433</sup> Lehmann 2021

<sup>434</sup> Ruthven, 1639; Ruthven in Thirsk, 2009, p83-84

<sup>435</sup> Willan, Cherniavsky and Clafflin, 2012, p105

<sup>436</sup> Weatherill, (1986), p131-56)

<sup>437</sup> Thirsk, (2009), p111-112: de La Varenne, (1653)

<sup>438</sup> Lehmann (2021)

<sup>439</sup> The full spreadsheet of analysis is available here:

<https://docs.google.com/spreadsheets/d/1qYfK9OV23zpnjBhsrvLIPn5EzH-da1SdW1L2wYACzGo/edit?usp=sharing>

<sup>440</sup> May, (1660)

ingredients for and form of pies. This way of illustration set the standard for most cookery books for the following three centuries.

The initial part of this book contains several letters to his sponsors<sup>441</sup> and potential customers (he addressed it to master cooks and young practitioners of cookery), a brief biography of himself, a rather startling description of how to build a full battle (navy) scene on a table with live birds baked inside a pie and exploding cannons, some letters that praise his book, instructions on how to carve fowl and, finally, recommended menus for various special days such as All Saints Day, Christmas, and New Year's Day, and then month-by-month menus. Published during the Commonwealth of Oliver Cromwell, when feasts and ostentatious and expensive meals were banned or frowned upon, it is interesting to see how complicated and expensive recipes (calling for several ounces of spices) co-exist with simple soups and boiled meats. The individual recipes are frequently followed by several different ways of making the same dish. The book comprises twenty-four sections, each referring to a particular type of ingredient or type of action, such as boiling, beef, heads, roasting, sauces, and jellies, etc. Two of the sections were not considered for analysis in this chapter: Section XXIII: *Diet for the Sick* and Section XXIV: *Feeding of Poultry*. These sections will be considered in the next chapter.

The incidence of almond and almond milk use dropped significantly from the previous book, possibly because dairy and poultry availability increased during this time. Eggs (in a variety of ways) are used significantly in every recipe, a change from the previous books. These were poached, raw, boiled, yolks/whites separated, hard or soft boiled, etc. Eggs are used for sauces, to thicken gravies, or for decoration. Adamson mentions that what people ate during these fasting days started to change; earlier eggs, cheese, and milk had been frowned on, but these rules were abolished in 1541.<sup>442</sup> With dairy being back in vogue, almond milk was not necessary and therefore its use dropped. The word 'omelette' enters the English language during this time.<sup>443</sup> The larger incidence of recipes relating to soups could be due to European influence, where soups were quite common. He refers to *French Bisque* (bisque of carp) and *Italian Brodo* (broth): "*To boil or dress any Land Fowl, or Birds in the Italian fashion in a Broth called Brodo-Lardiero) or Capilotado, or Custard, in the Hungarian fashion, in the pot, or baked in an Oven or To Boil a Pike in the French Fashion, a-la-Sauces d'Almaigne or in the German Fashion*" or a way of cooking eggs in the "*The Fifth Way in the Portugal Fashion or To dress Eggs in the Spanish Fashion, called, vivos me quidos*". He even goes into specific regional cuisines such as Bolonia Sausages or Preserved Peaches in the Venetian Way or the Capilotado, in the Lumbardy Fashion of a Capon. He also uses parmison (Parmesan) hard cheese in some of his recipes. Interestingly, the first recipe using the hard cheese is a French recipe, "*Another French boil'd meat of Pine-molet.*" There is even a Spanish recipe (Forcing in the Spanish Fashion in balls). Salads make an appearance, where vegetables are chopped and served. *Sallet Oyl* is also used (salad oil), which could be olive oil imported from either Italy or Spain. He also refers to a Turkish meat dish, as well as using rose water in many recipes (part of Middle Eastern cooking that came over from the crusades as mentioned earlier), so there was indeed an international perspective.

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<sup>441</sup> Note that this book was published in 1660, almost 120 years after the dissolution of the Monasteries, which gave rise to an extraordinarily high number of land-owning classes who bought lands previously owned by the monasteries and established grand houses to entertain and yes to use spiced food.

<sup>442</sup> Adamson, (2004), p47)

<sup>443</sup> Toussaint-Samat, (2009), p326

Most of the recipes use herbs in a variety of ways. Common herbs like marjoram, time (thyme), rosemary and sage are used copiously, and coriander (both herb and seeds) also appear in this book for the first time in English cookbook history. May offers different instructions on what to do with spices, such as ground, sliced, quartered, grated, raced, and beaten, for example, relating to whole nutmeg or whole pepper. Some of the recipes named herbs and others only provided a brief description, such as *“faggot of sweet herbs”*. The treatment is quite robust, such as *“tie them up hard”* or *“finely minced”* or *“coursly minced with two or three cuts of a knife”* or *“bruised with the back of a ladle on a clean board”* or *“fried herbs.”* There is usually no explanation on the quantity of herbs to be used. There is also no apparent rhyme or reason for which herbs to use; sometimes it just says a bunch of herbs or sweet herbs followed by examples ending, usually with &c.<sup>444</sup> Modern recipes give some indication, such as so many sage or bay leaves, or a three cm long rosemary sprig, or one tablespoon of caraway seeds; however, not in this book, where the use of herbs seems to be much more lackadaisical. An example of a recipe with both specific herbs and a collective herb indication is: *\_Pottage of Mutton, Veal, or Beef, in the \_English\_ Fashion.\_ Cut a rack of mutton in two pieces, and take a knuckle of veal, and boil it in a gallon pot or pipkin, with good store of herbs, and a pint of oatmeal chopped amongst the herbs, as tyme, sweet marjoram, parsley, chives, salet, succory, marigold-leaves and flowers, strawberry-leaves, violet-leaves, beets, borage, sorrel, bloodwort, sage, pennyroyal; and being finely boil'd, serve them on fine carved sippets with the mutton and veal, \_&c.*<sup>445</sup> Here, the language started to change from medieval English to early modern English, such as the disappearance of the use of “f” for “s”, which makes reading easier. The grammar is more modern, using urgent active verbs and imperative terms such as leach your brawn and force a breast of Veal. Scottish influences are noticeable with the mention of haggis in the recipes: *“To make a Haggas Pudding in a Sheeps Paunch: Take good store of Parsley, savory, time, onions, oatmeal groats, chopped together, and mingled with some beef or mutton-suet minced together, and some cloves, mace, pepper, and salt; fill the paunch, sow it up, and boil it. Then being boiled, serve it in a dish, and cut a hole in the top of it, and put in some beaten butter with two or three yolks of eggs dissolved in the butter or none. Thus, one may do for a fasting day, and put no suet in it, and put it in a napkin or bag, and, being well boiled, butter it, and dish it in a dish, and serve it with sippets.”*<sup>446</sup>

A few novel items emerge in the book in a substantial fashion, such as potatoes (which he refers to as Virginia potatoes).<sup>447</sup> Both varieties are North American imports and were common enough to be included in cookbooks. There was one Turkish recipe in the previous book, mentioned above, and across Europe, potatoes slowly started to be considered as a good food for common people, though it took until the eighteenth century for them to really be adopted.<sup>448</sup> Marigold flowers are also a new entrant, but this may not be the common marigold seen in today's gardens. The current common marigold could indeed have been present during the seventeenth century, as an import from its native North America, but most probably these references relate to *Calendula officinalis*, an English and European native flowering plant whose flowers were the poor

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<sup>444</sup> Standing for etc. / latin: et cetera

<sup>445</sup> May, (1685), p 78

<sup>446</sup> ibid, p25

<sup>447</sup> Wright, Clarissa Dickson, (2011)

<sup>448</sup> Earle, (2017), p147-162

man's saffron.<sup>449</sup> Garlic makes an appearance, usually related to French recipes. Thirsk comments on how many cookbooks made a point about how the English have a distaste for garlic: she refers to the diary of Hartlib from 1653 where he writes that one Maining had a way of removing the stink from garlic.<sup>450</sup> In addition, quite a lot of recipes show citrus fruits like oranges, lemons and limes that were imported. Horseradish roots also make an appearance for the first time in an English cookery book.

Other novel items appear such as Pistaches (Pistachio), cucumber, Musk and Ambergreese / Ambergriese (Ambergris) in copious quantities, the last two items having been mentioned above. Pistachios are used in quite a lot of recipes. Cardons appear for the first time, though it is not very clear if this refers to Cardamoms or to Cardoons (a vegetable grown in France), although by the placement of the word, it could potentially be spices (garnish the dish with roast turnips, or roast onions, cardons, and mace, \_&c). Ambergris is a surprise, as it is not clear if this relates to amber (as in the fossilised tree resin) or the Ambergris produced by sperm whales. Irrespective of this, it is the first time this appears in a recipe book, such as in the following recipe: "To make a rice pudding to bake. Boil the rice tender in milk, then season it with nutmeg, mace, rose water, sugar, yolks of eggs with half the whites, some grated bread, and marrow minced with amber grease, and bake it in a buttered dish."<sup>451</sup> Another new entrant is saltpetre, which is used to rub on ox or cow tongue to dehydrate it. Pepper vinegar is also a new entry, where whole pepper is put in a fine cloth and steeped in normal vinegar for eight days. Similarly, further developing the spices themselves, May includes a Dijon or French mustard recipe where mustard seed is crushed and ground in a mortar with cinnamon, honey and vinegar. Verjuice is listed in several recipes, some with or without spices. He also includes separate recipes for sauces and for the underlying main ingredient. For example, different recipes for roasting different meats (about five) are followed by different recipes for sauces for that meat, the idea being that the cook should decide how the meat is to be cooked and then the sauce will differ, the result being that the meat will be served on top of the sauce or at the side. Given this, sauces were separate recipes.

Another interesting perspective is what the author means by seasoning. According to modern cooking standards, seasoning is usually restricted to salt and pepper. As the above recipe shows, seasoning can be a variety of spices and other ingredients, not just salt and pepper. Either the meaning of "seasoning" changed, or the variety of seasoning ingredients reduced over time. Similarly, garnishing in the modern sense is usually with herbs, but in a recipe *To dress Oxe Cheeks in Stofado, or the Spanish fashion*, he recommends garnishing with bay leaves. In many recipes, whole or large spices are kept in the dish (such as cinnamon, large mace, peppercorns, and sliced nutmeg)-the expectation being that these would be eaten as well, as opposed to very few recipes where these whole spices are removed prior to serving. A spice mixture called Tamara (from Italy) is also described: "Take two ounces of coriander seed, an ounce of anniseed, an ounce of fennel seed, two ounces of cloves, and an ounce of cinamon; beat them into a gross powder, with a little powder of winter-savory, and put them into a viol-glass to keep."<sup>452</sup>

Raw food was seldom served in elite households in medieval times and was mostly a peasant cuisine, but from the Renaissance onwards (beginning of the sixteenth century) and from

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<sup>449</sup> URL:<https://www.rhs.org.uk/Plants/62350/Calendula-officinalis/Details>. Accessed: 2018-06-21. (Archived by WebCite® at <http://www.webcitation.org/70LGz0dHV>)

<sup>450</sup> Thirsk, (2009), p205

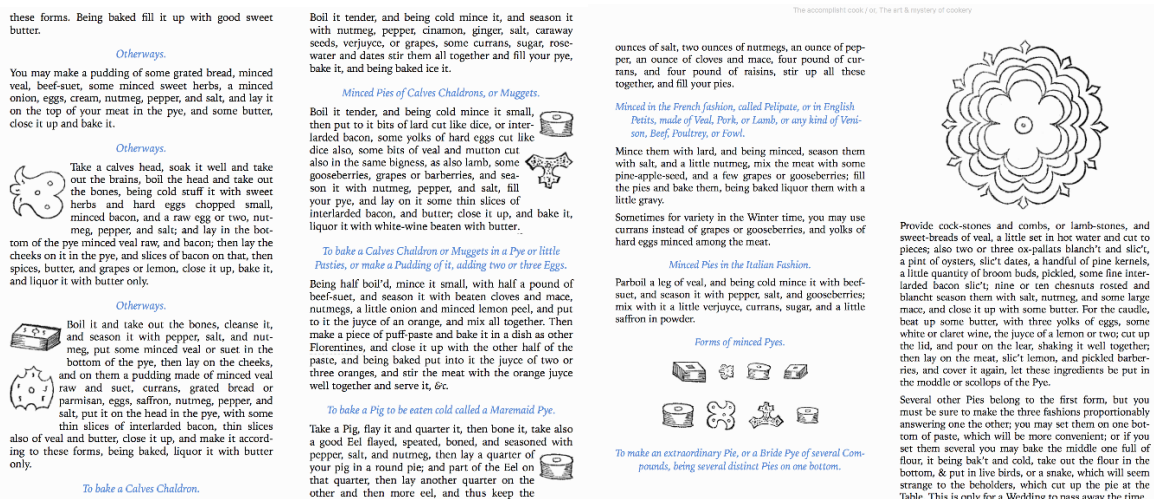
<sup>451</sup> May, (1660), p182

<sup>452</sup> *ibid*, p115



Italy, the fashion for serving salads spread across Europe.<sup>453</sup> The book has an entire separate section on Sallet (salad), where a variety of herbs, green vegetables, eggs, dried fruit, nuts, lemons, and sauces are included.<sup>454</sup> Very few of them, though, include spices. Verjuice was mentioned and is a common component in many dishes. Whilst one recipe for verjuice in this book does not use any spices, other recipes in other books include spices; hence it was included in the analysis. Also, to be noted, is that the analysis is undercounting the number of spices used; for example, many recipes say that gravy needs to be included separately. Gravy recipes often include spices. Similarly, sauces are quite common as before, for example, wildfowl and poultry served with boiled onions with pepper, sparrows stewed in ale and herbs, larks in wine with bone marrow, raisins, and cinnamon. Religiously mandated food is also mentioned with some recipes, such as: “*A Tansie for Lent - Take tansie and all manner of herbs as before, and beaten almond, stamp them with the spawn of pike or carp and strain them with the crumb of a fine manchet, sugar, and rose water, and fry it in sweet butter.*”<sup>455</sup> It should be noted that in the sixteenth century, England was still a Catholic country, and the Church significantly controlled what was eaten when, especially around Lent and feast days.<sup>456</sup> As time progressed, and as this book shows, the general populace ate what they wished, and fasting days were considered more of an interloper. Feast days, on the other hand, were great reasons to prepare large meals, such as Easter, Pentecost, the Feast of St. John the Baptist, followed by Christmas, etc. Elizabeth I many times encouraged people to eat fish on fast days to sustain England’s fishing fleet and to create sailors for the English Navy.<sup>457</sup>

FIGURE 66 - THE ACCOMPLISHT COOK, ROBERT MAY, ILLUSTRATIONS (1660, P 219, 234)



The book also, for the first time in the history of cookbooks, starts to add illustrations to the recipe, as can be seen in Figure 66. These are indications of how the dish should be decorated, for example, a pie, or it shows the type of pie forms to use, either individually or in very complex pie structures, usually for bridal pies (see the *Fete at Bermondsey* painting in the next section for an illustration of such large pies). Robert May provides some interesting recipes as well, such as recipes to dress beef or mutton to make them look like venison. Another set of recipes relates to tainted

<sup>453</sup> Freeman, (2007), p44-60

<sup>454</sup> May, (1660), p158-66

<sup>455</sup> ibid, p175

<sup>456</sup> Adamson, (2004), p39, 85-88

<sup>457</sup> Picard, (2016)

meat. One of the common misconceptions about spices in mediaeval food is that they were used to cover up tainted meat. Food researchers point out that this is a misconception because most people using spices were extraordinarily rich and would not usually consume tainted meat. May offers some recipes for tainted meat using a lot of herbs and vinegar to camouflage the stink/taste, such as: *“To make meer sauce, or a Pickle to keep Venison in that is tainted. Take strong ale and as much vinegar as will make it sharp, boil it with some bay salt, and make a strong brine, scum it, and let it stand till it be cold, then put in your vinison twelve hours, press it, parboil it, and season it, then bake it as before is shown. And Other Sauce for tainted Venison. Take your venison, and boil water, beer, and wine-vinegar together, and some bay-leaves, tyme, savory, rosemary, and fennil, of each a handful, when it boils put in your venison, parboil it well and press it, and season it as aforesaid, bake it for to be eaten cold or hot, and put some raw minced mutton under it.”*<sup>458</sup>

FIGURE 67 - THE ACCOMPLISHT COOK, ROBERT MAY – SPICE ANALYSIS - 1660

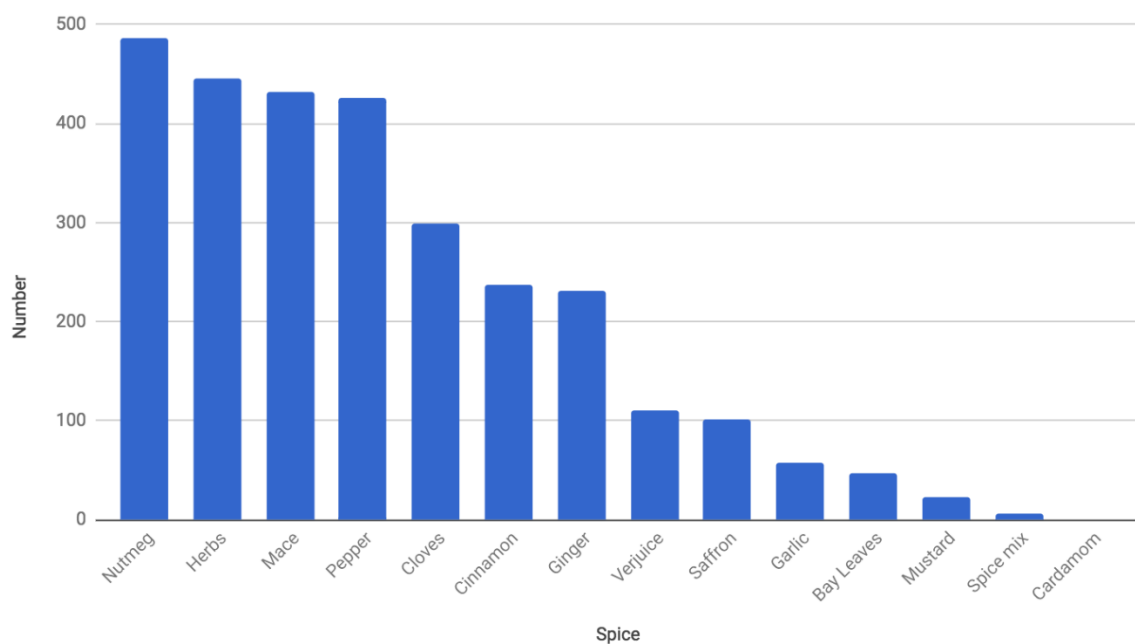


TABLE 17 - THE ACCOMPLISHT COOK, ROBERT MAY – SPICE ANALYSIS -1660

Spice	Number	Percentage
Nutmeg	486	40.74%
Herbs	446	37.38%
Mace	432	36.21%
Pepper	426	35.71%
Cloves	299	25.06%
Cinnamon	238	19.95%
Ginger	232	19.45%
Verjuice	111	9.30%
Saffron	102	8.55%
Garlic	58	4.86%
Bay Leaves	47	3.94%
Mustard	23	1.93%

<sup>458</sup> May, (1660), p230

Spice Mix	7	0.59%
Cardamom	1	0.08%

Nine hundred and thirty-nine recipes included at least one spice, amounting to 78.71 percent and the results are shown in Figure 67 and Table 17. The percentage of recipes using spices increased as compared with the previous book, where the percentage of recipes with at least one spice was 60 percent, which is one indication that the availability of spices also increased. The widespread use of nutmeg and mace could suggest that the supply chain was beginning to transport enormous quantities of Moluccan Island spices from Indonesia through the Portuguese, English, and Dutch sea routes. In the last Dawson book analysed, ginger and pepper were the highest ranked in usage. Now nutmeg, mace and pepper moved into the highest ranks. More exotic spices, such as bay leaves, are used in quite a lot of recipes. A very large number of recipes also included herbs, as previously mentioned. Some interesting patterns are visible: cinnamon and ginger frequently went together, as did cloves and mace. Finally, a word on mustard, which grew wild in England in places like Tewkesbury, Wakefield, etc. and was also exported from the port of Boston. Mustard was essential with venison. May includes a recipe for making mustard loaves to be carried in one's pocket to use while travelling. The recipe mixes mustard with honey, cinnamon, and vinegar, to be dried in the sun or in the oven.<sup>459</sup> It could perhaps be the spice with the longest historical record of any flavouring in England.<sup>460</sup> Despite the puritanism propagated during the Reformation, the food mentioned in the book is extensive and expensive.

Samuel Hartlib's *Ephemerides*, 1635–59 is a personal diary, mentioning all kinds of food, food production, medicines, recipes, and observations on general rural life.<sup>461</sup> He offers a recipe for a pickle: “Goodrons pickle made of seawater, wine, vinegar, bay leaves, mints, pepper, ginger, & cinnamon, which is a alike excellent for oysters, & mussels, & [letter deleted] is by Dr Muffet warranted to make the Mussle as wholesome, & more pleasant, than the oister.” A book titled “*The Court and Kitchen of Elizabeth Commonly Called Joan Cromwell the Wife of the Late Usurper, Truly Described and Represented*” was published in 1664, just a few years after Oliver Cromwell died.<sup>462</sup> It tells us about everyday life during this time, ranging from simple recipes such as sausages and beef dishes using spices. The book alleges that the Cromwell family had a strong prejudice against foreign foods, but many recipes were labelled Dutch, French, or Italian and, contrary to the desire to have simple foods, one example is given below where nutmeg, thyme, and spices are used: “*How to make Scotch Collops of Veal: Take a fillet of veal, cut it out into very broad slices, fat and lean, not too thick; take eight eggs, beat them very well with a little salt, grate a whole nutmeg, take a handful of Thyme and strip it, take a pound of Sawseges, half a pint of Stewing Oysters, the largest to be had, wash and cleanse them from the Gravel: then half fry your Veal with sweet Butter, then put in your Sawseges and Oysters, then take a quarter of a pound of Capers, shred them very small; three Anchovis, dissolve them in white Wine and fair water, so put in your Eggs, shred Capers, and Anchovis, Butter and Spice, and mingle them, and strew them in the Pan upon the Veal and Oysters; serve it with Sippets, with a little fresh butter, and vinegar, and Limons sliced, and Barberies, with a*

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<sup>459</sup> *ibid*, p157

<sup>460</sup> Thirsk, (2009), p315

<sup>461</sup> Hartlib, (1659)

<sup>462</sup> Cromwell, (1664)

little salt. You must have a care to keep the meat stirring, lest the Eggs curdle with the heat of the fire.”<sup>463</sup>

There are also expensive recipes, such as one for a marrow pudding, containing ambergris, nutmeg and almonds: “Take a pound of the best Jordan almonds, blanch them, beat them fine in a stone or wooden Mortar (not in brasse) with a little Rose water, take a pound of fine powder sugar, a penny Loaf grated, grated nutmeg, a pint of cream, the marrow of two marrow-bones, two grains of ambergris; mingle them altogether with a little salt, fill the Skins [pig’s intestines], boyl them gently as before.”<sup>464</sup> The austerity and puritan philosophy that extended to food under Cromwell were reduced once Charles II (1630-1685) came into power.

The next significant cookery book was written by Sir Kenelme Digbie in 1669, entitled *The closet of the eminently learned Sir Kenelm Digbie Kt. opened: Whereby is discovered several ways for making metheglin, sider, cherry-wine &c. together with excellent directions for cookery, as also for preserving, conserving, candying, &c.*<sup>465</sup> He compiled this recipe book; hence it is reviewed rather than analysed in detail. He collects recipes from all over Europe, such as from Germany, Portugal, Muscovy, and France and refers to the source of the recipes, such as “Lord George’s Meathe (mead),<sup>466</sup> the Countess of Newport’s Cherry Wine,<sup>467</sup> the Sweet Drink of My Lady Stuart<sup>468</sup> and My Lord Lumley’s Pease-Porage.<sup>469</sup> It includes an extraordinarily large number of recipes for beer, sack possets, mead, wine, ales, and cider, made in a bewildering variety of ways, frequently using herbs and spices. An example of a common recipe is, “My Lord of Carlile’s Sack-Posset: Take a pottle of cream, and boil in it a little whole cinnamon and three or four flakes of mace. To this proportion of cream put in eighteen yolks of eggs, and eight of the whites; a pint of sack; beat your eggs very well and then mingle them with your sack. Put in three quarters of a pound of sugar into the wine and eggs with a nutmeg grated, and a little beaten cinnamon; set the basin on the fire with the wine and Eggs, and let it be hot. Then put in the cream boyling from the fire, pour it on high, but stir it not; cover it with a dish, and when it is settled, strew on the top a little fine Sugar mingled with three grains of ambergreece, and one grain of musk, and serve it up.”<sup>470</sup> Spices are used frequently in most recipes, and the prevalence of manchet bread is an indication that this book is meant for the higher aristocratic or rich socio-economic class.

Another example is *Aqua Mirabilis*, also using a large number of herbs and spices, some of which are quite rare, such as Cubebs or Galingale: “Take Cubebs, Galingale, Cardamus, Mellilot-flowers, cloves, mace, ginger, cinnamon, of each one dram bruised small, juyce of Celandine one pint, juyce of Spearmint half a pint, juyce of Balm half a pint, sugar one pound, flower of Cowslips, rosemary, borage, bugloss, marigold, of each two drams, the best Sack three pints, strong Angelica-water one pint, red rose water half a pint; bruise the spices & flowers, & steep them in the sack & juyces one night; the next morning distil it in an ordinary or glass-still, & first lay Harts-tongue leaves in the bottom of the still.”<sup>471</sup> In an appendix (III), he lists the ingredients, indicating the wide variety of spices and flavouring used. Cardamom appears for the first time in a cookery book. The last item

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<sup>463</sup> *ibid*, p49

<sup>464</sup> *ibid*, p56

<sup>465</sup> Digbie, (1699)

<sup>466</sup> *ibid*, p55

<sup>467</sup> *ibid*, p109

<sup>468</sup> *ibid*, p142

<sup>469</sup> *ibid*, p155

<sup>470</sup> *ibid*, p115

<sup>471</sup> *ibid*, p271

(14) is of interest for the eye-catching expensive ingredients. “3. *Seeds. —Anise; cardamom; carraway; citron; coriander; fennel; gromwell; melon; musk grains; mustard; nettle; parsley; saffron; tulip, seedy buds of; wormwood...* “9. *Spices of all sorts; cloves; cinnamon (also oil of, & spirit of); ginger; mace; mustard; nutmeg; pepper; .....* “. Other notable seasonings and ingredients: — *Ambergris; ivory; leaf gold; powder of white amber; powder of pearl; Spanish pastilles (ambergris, sugar, & musk).*”<sup>472</sup> He also offers simpler recipes such as Portugal Broth (claiming it was made for the queen). It is clear chicken soup with parsley, garlic, thyme, mint, coriander seeds and saffron.<sup>473</sup>

A critical point to note in the post-Cromwellian period is that numerous members of the aristocracy, nobility, and rich merchants fled to France, then returned after spending many a year there. They returned to England steeped in the French culinary traditions and cooking. It is during this period that La Varenne published his *Le Cuisinier Francois* in 1651, perhaps the most influential cookbook in modern times.<sup>474</sup> This cuisine breaks new ground in moving food away from the heavily spiced mediaeval cuisine, which relied heavily on spices such as saffron, cinnamon, cumin, ginger, nutmeg, and cardamom, Nigella seeds of paradise, replacing them with local herbs (parsley, thyme, chervil, sage, and tarragon). As late as 1753, the Duke of Newcastle mentioned his former French cook’s “*little hors d’oeuvre or light entrées . . . plain simple dishes that he used to make me, and which are so much in fashion here—for instance, tendons of veal, fillets of young rabbit, pigs’ and calves’ ears, and other little dishes of that sort*”.<sup>475</sup>

There was a xenophobic element to French cooking being introduced to England, and this was mainly on the middle and lower classes, as the upper classes were quite influenced by French cookery.<sup>476</sup> As a reaction against William Verral’s *A Complete System of Cookery*, published in 1759, very heavily influenced by French cookery,<sup>477</sup> a reviewer said: “*If you are really ambitious of culinary fame, and desirous of gratifying the palates of your countrymen with variety, we advise you to reject the pernicious slops, sauces, and kickshaws [fancy dishes] of the French, which serve only to irritate the appetite, spoil the digestion, and debilitate the constitution; and rather endeavour to contrive dishes of substantial food, upon true British principles: dishes that may suit the digestive powers, enrich the blood, invigorate the nerves, and brace the sinews of the body.*”<sup>478</sup> This book is reviewed later in this section. The pressure to have traditional, heavily spiced, meat-and fish-based dishes in England continued. Beefsteak clubs, which heavily popularised meat in the national dish, started appearing from 1705 and remained well into Victorian times. The phrase the “*roast beef of old England*” is from the ballad written by Henry Fielding in 1730, which was given a new setting by the composer Richard Leveridge. The ballad became so popular that it became the norm for theatre audiences and other shows to sing this ballad before, after and sometimes during the plays. The tune to this song is still played at the UK Royal Navy, UK Royal Artillery and USA Marine Corps formal mess dinners. The first two stanzas are important as they are not only referencing roast beef but also refer to the ragout dish, which is highly spiced and discussed in the Hannah Glasse cookbook analysis in this section.<sup>479</sup>

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<sup>472</sup> *ibid*, p275-77

<sup>473</sup> *ibid*, p127

<sup>474</sup> Scully, (2006), p48

<sup>475</sup> Willan, Cherniavsky and Clafflin, (2012), p193

<sup>476</sup> Lehmann (2021)

<sup>477</sup> Verral, (1759)

<sup>478</sup> Dickson Wright, (2011), p236

<sup>479</sup> Roberts, (1964), p175-181

“When mighty Roast Beef was the Englishman's food,  
It ennobled our veins and enriched our blood.  
Our soldiers were brave and our courtiers were good  
Oh! the Roast Beef of old England,  
And old English Roast Beef!

But since we have learnt from all-vapouring France  
To eat their ragouts as well as to dance,  
We are fed up with nothing but vain complaisance.  
Oh! the Roast Beef of Old England,  
And old English Roast Beef!”

FIGURE 68 - THE ROAST BEEF OF OLD ENGLAND, 1748, WILLIAM HOGARTH



The Ballad motivated *The Gate of Calais or O, the Roast Beef of Old England*, a 1748 painting by William Hogarth, seen in Figure 68.<sup>480</sup> The painting is full of allegories to French antipathy, and the soup in the foreground is watery and unappetising compared with the hearty side of beef. As Stobard explains: “The English prided themselves on the quality of their meats, which did not need embellishing in the stereotypical French way, and on the excellence of their roasting techniques and equipment.”<sup>481</sup> Ragout was highly and strongly flavoured and frequently associated with spiced food. Paris was infused with the smell of liqueurs and spices.<sup>482</sup> The French also had a reaction against highly spiced and flavourful dishes such as ragout, and this led to less spicy food in new French cooking.<sup>483</sup> Ragout during this time was prepared with spices such as nutmeg, pepper, cumin, cloves,

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<sup>480</sup> Hogarth, (1748)

<sup>481</sup> Stobart and Hann, (2016), p160

<sup>482</sup> Mercier (1791)

<sup>483</sup> Spary (2012), p228

flavoured spices and bay leaves, besides salt, of course, and this was especially in beef ragout for example in English recipes<sup>484</sup> and French recipes.<sup>485</sup>

Sarah Fell's account book (covering the period 1673-1678) provides a fascinating single household view on the expenses incurred in running a household, including cookery and spices. She purchases cinnamon waters, juniper berries and saffron.<sup>486</sup> In the period 1700-1800, there was an explosion of food and cookery books, in several editions.<sup>487</sup> Most middle-class Georgian homes had at least one cookery book and literate maids, able to follow the instructions.<sup>488</sup> Reviewing the Receipt Book of Lady Anne Blencowe (1656-1718) (the recipes were collected throughout her life but only published in 1925 for the first time), one can note that spice usage is slowly morphing into a different form, less spiced meats and more roast meats.<sup>489</sup> However, spices are still used in confectionery, drinks, preserves, and sauces.

The next relevant book *The Compleat Housewife, or Accomplish'd Gentlewoman's Companion*, was written by Eliza Smith in 1727. Given the considerable number of medical recipes and the crossovers with Gervase Markham's book, this volume was selected for review rather than a detailed spice textual analysis. Most recipes use spices, either individually or combined, as in the following recipe for a Battalia Pye: *"Take four small chickens, four squab pigeons, four sucking rabbits; cut them in pieces, season them with savoury spice, and lay 'em in the pye, with four sweetbreads sliced, and as many sheep's tongues, two shiver'd palates, [b] two pair of lamb-stones, twenty or thirty coxcombs, with savoury balls and oysters. Lay on butter and close the pye."*<sup>490</sup> In the preface, she mentions how seasonings were made and what they were used for: *"Whether the feafonings made ufe of in the infancy of the world were falt, favoury herbs, or roots only, or fpices, the fruits of trees, juch as pepper, cloves, nutmegs; bark, as cinnamon, roots, as ginger, &c I fhall not determine but, as to the methods of the cookery of thofe times, boiling or flewing feems to have been the principal, broiling or roafting the next: befides which, I perfume, fcarce any other, were ufed for more than two thousand years."*<sup>491</sup> She provides a list of "fruits and garden stuff" and their seasonal availability. Her book is divided into parts, with individual chapters dealing with foodstuffs / themes / conditions. Part I is about purchasing goods ranging from butcher's meat, poultry, fish, butter, eggs, and cheese. Part II relates to cookery: boiling, dressing greens and roots, roasting, broiling, frying, baking, sauces, soups, and broths; made dishes, fricaseys, ragoos, hashes, stews, pancakes and fritters, puddings, and pyes. Part III relates to confectionery such as sugars, candies, preserves, tarts, pastries and puffs, custards, cakes, and biscuits. Part IV is about preparing bacon, hams, tongues, butter, and cheese. Part V relates to foreign dishes, detailing French, Jewish, Spanish, Dutch, German, and Italian dishes. Chapter one is dedicated to French cuisine, whilst all the others are consolidated into another chapter, indicating the importance of French cuisine to an English audience. Part VI is about carving. Part VII is for potting, collaring, and pickling. Part VIII includes preserves, conserves, syrups, creams, and jellies. Part IX is for wines and cordial waters, and Part X is

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<sup>484</sup> Smith (1758), p4, 9, 11, 15, 34

<sup>485</sup> Dumas (1958), p76, 81, 82

<sup>486</sup> Fell, (1920)

<sup>487</sup> Maclean, (1981)

<sup>488</sup> Lyons, (1997)

<sup>489</sup> Blencowe et al, (2004)

<sup>490</sup> Smith, (1727), p130

<sup>491</sup> Ibid, A3







*a tolerable good cook, and thofe who have the leaft notion of Cookery cannot mifs of being very good ones.* It was also the first commonly referred to published book authored by a woman.<sup>495</sup> Maclean notes that this book went through thirty-six editions.<sup>496</sup> Its popularity attracted significant opprobrium from others, accusing Glasse of plagiarising recipes, incorrect or weak recipes, and that it was not appropriate for servants.<sup>497</sup> The book also explicitly recognised that people had started to return from the vast dominions formed by the EIC to retire in England. These people were exposed to international colonial cooking and perhaps had formed habits requiring recipes in England; hence is noted to be the first recipe book in English to include a recipe for making curry and pilau the Indian way,<sup>498</sup> Indian Pickle and *Paco Lilla (picalli)*.<sup>499</sup> The book remained popular, reaching forty editions (many of them pirated), and was also popular in North America.<sup>500</sup> The book has twenty-two chapters, with the last part named as Additions with an Appendix (containing the first recipe for ice cream).

Some of the weights and measurements given are eye-catching. For example, in the recipe for roasting a hare, Glasse asks for “*about as much thyme as will lie on a fixpence.*”<sup>501</sup> All recipes with spices are moderate and call for a “little pepper” or suchlike. It should be noted that, in large part, the majority her recipes are not recipes but basic directions, such as how to dress spinach or how to keep meat hot, though if the entry is recognisable as a separate entry, it was noted as a recipe. Moreover, she frequently mentions the importance of having clean hands, clean food, washing frequently, and ensuring pots and pans are exceptionally clean and clear. It is interesting to note this kind of hygiene guidance, which was not observed before. Overall, one can see that the number of spices used reduces significantly, and if used at all, it is a small amount of pepper and salt, sometimes a little bit of nutmeg. Salt and pepper are now frequently referred to together in most dishes mentioning pepper. Verjuice disappeared from her cookbook; there is no need for spiced green grape juice in her recipes. Previously, the recipes would call for 4-5 full mace flowers, but now Glasse suggests just one blade of mace in a dish, which is 1/4th of a flower. The previously mentioned concept of throwing in a bunch of herbs or a bundle of herbs also reduced significantly. The recipe is usually plain and if herbs are needed, then besides a little bundle of herbs, individual herbs are named, commonly parsley and in less frequent cases, thyme. Allspice berries are mentioned for the first time in the book, such as “*To stew a turkey or fowl in celery-fauce*” where “mace, cloves, pepper and allspice” are tied together in a muslin cloth;<sup>502</sup> other recipes using allspice are for pickling red cabbage and walnuts.

Allspice was discovered by Christopher Columbus when nearing the completion of his first voyage and was first called Melegueta, a reference to the Molucca Islands, or Spice Islands in Indonesia. Columbus was confused because the dried berries of the *Pimenta Officinalis* resemble peppercorn and have the name *pimienta* (Spanish word for pepper).<sup>503</sup> The spice was finally

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<sup>495</sup> URL: <http://www.bl.uk/learning/langlit/texts/cook/1700s2/arttitlehome/arttitle.html>. Accessed: 2018-06-21. (Archived by WebCite® at <http://www.webcitation.org/70LHInVpa>)

<sup>496</sup> Maclean, (1981), p59-61

<sup>497</sup> Monnickendam, (2019), p175-191

<sup>498</sup> Glasse, (1747), p74-75

<sup>499</sup> *ibid*, p222

<sup>500</sup> URL: <http://www.bl.uk/learning/langlit/texts/cook/1700s2/arttitlehome/arttitle.html>. Accessed: 2018-06-21. (Archived by WebCite® at <http://www.webcitation.org/70LHInVpa>)

<sup>501</sup> *ibid*, p5

<sup>502</sup> *ibid*, p51

<sup>503</sup> Thacher, (1903)

christened allspice because its aroma suggests a mixture of cinnamon, cloves, and nutmeg, but it was not till Hannah Glasse's book that allspice made an appearance in the British cookery books. Furthermore, the use of muslin cloth is new. Muslin cloth was imported from Bengal in India by the EIC from the seventeenth century onwards. Given the ubiquity of muslin cloth, it was unsurprising that rags became available for kitchen cooking. Seasoning also changed considerably; previously, seasoning with nutmeg was essential, but following the publication of the book, for steaks and meats, the seasoning was at best with a little pepper and salt. The earliest steak recipe recognised as comparable to modern ways of cooking steak very simply, with a gridiron making the characteristic charred grid pattern, appears in this book. The suggestion to add shallots and onions was optional: *"First have a very clear brifk fire: let your gridiron be very clean; put it on the fire and take a chaffing-difh with a few hot coals out of the fire. Put the difh on it which is to lay your fteaks on, then take fine rump fteaks about half an inch thick; put a little pepper and falt on them, lay them on the gridiron, and (if you like it) take a fhalot or two, or a fine onion and cut it fine; put it into your difh. Dont turn your fteaks till one fide is done, then when you turn the other fide there will foon be fine gravy lie on the top of the fteak, which you muft be careful not to lofe. When the fteaks are enough, take them carefully off into your difh, that none of the gravy be loft; then have ready a hot difh and cover, and carry them hot to table, with the cover on."*<sup>504</sup>

Glasse includes numerous simple recipes, such as how to boil or broil various meats. Sauces are mentioned separately. Meats are usually not cooked in the sauce but roasted or broiled separately with the sauces served in a little plate on the side. Another first was giving an indication of the time needed to cook the meat. She also mentions how cooking needs to be over an open flame, albeit with a gridiron, suggesting that the target audience still did not have the cooking ranges that started to appear in richer household kitchens. For example, she mentions recipes for cuts of meat that are uncommon or cheap such as making stews of ox-palates, hogs' feet and ears and udders, and many recipes using tripe, though for some tripe recipes, she suggests using spices and other condiments such as walnut pickle or capers to make them more interesting. Furthermore, she advises against throwing away bones; for example, *"To ragoo a piece of beef,"* she recommends the bones be cut out but suggests in parenthesis that bones make fine soup.<sup>505</sup> Recognising the cost issues, she includes recipes such as *"To make a cheap rice pudding"* or *"to make a cheap feed-cake."*<sup>506</sup> The former recipe asks for a little nutmeg and the latter for some allspice; hence, even cheap dishes can do with a little expensive spice. A recipe for a rich seed cake, called the nun's cake, has ambergrease as an optional ingredient.<sup>507</sup> A recipe for whipped cream adds musk or ambergrease to perfume it (not optional).<sup>508</sup> A recipe for Steeple Cream adds a little amber. It remains unclear whether this refers to the sap (amber) or whether it was a mistake intending ambergrease instead.<sup>509</sup> Though there are other recipes indicating amber being used as a term to mean the colour. A recipe for chocolate and one candy caffia adds musk and ambergrease.<sup>510</sup> A rich recipe calls for powdered pearl, half a pint of damask rose water, and leaves of beaten gold. ``To

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<sup>504</sup> Glass, 1747), p5

<sup>505</sup> *ibid*, p24

<sup>506</sup> *ibid*, p209

<sup>507</sup> *ibid*, p209-10

<sup>508</sup> *ibid*, p217

<sup>509</sup> *ibid*, p215

<sup>510</sup> *ibid*, p277

*make fugar of pearl*", an extraordinary recipe, considering this book is for housewives.<sup>511</sup> Glasse includes some interesting recipes for households who want to stretch their purse, such as, "*If you fhould have but one pheafant, and want two in a difh, take a large full-grown fowl, keep the head on, and trufs it just as you do a pheafant; lard it with bacon, but dont lard the pheafant, and nobody will know it.*"<sup>512</sup> Some directions are rather startling for example for roasting, "*A Pig, if just killed, an hour; if killed the day before, an hour and quarter; if a very large one, an hour and half. But the beft way to judge, is when the eyes drop out, and the skin is grown very hard; then you muft rub it with a coarfe cloth, with a good piece of butter rolled in it, till the crackling is crifp and of a fine light brown.*"<sup>513</sup> "*To drefs a brace of carp*" is a recipe that starts with "*FIRST knock the carp on the head, fave all the blood you can*"....which leads one to believe that the carp was alive when cooking started."<sup>514</sup> Food preparation at that time was more hands-on and not for the squeamish compared to modern times. Despite the drastically reduced number of spices, it is still clear that Hannah Glasse expects even lower-class households to have some spices available, such as pepper, cloves, nutmeg, and mace. Some recipes also call for black as well as white whole pepper (corns), which posits a base level of spice sophistication despite the reduced usage.

The tension with French cooking and her antipathy towards French cooks is evident, though the underlying French ingredients and recipes are commonly used. For example, in the recipe for roast pheasants, she writes, "*A Frenchman would order fifh-fauce to them, but then you quite fpoil your pheafants*".<sup>515</sup> In the beginning of Chapter III, she writes, "*read this chapter, and you will find how expensive a French cook's fauce is.*"<sup>516</sup> In the last recipe of this chapter, she mentions: "*They (meaning the French cooks) will ufe as many fine ingredients to ftew a pigeon, or fowl, as will make a very fine difh, which is equal to boiling a leg of mutton in champaign. It would be needlefs to name any more; though you have much more expenfive fauce than this; however, I think here is enough to fhew the folly of thefe fine French cooks. In their own country, they will make a grand entertainment with the expence of one of thefe difhes; but here they want the little petty profit; and by this fort of legerdemain, fome fine eftates are juggled into France*".<sup>517</sup> Many French recipes are included, like Beef a la mode, the French way or to boil a rump of beef the French Fafhion, Pullets a la Sainte Menebout, a fowl a la braife, sweetbreads of veal a la Dauphine, a French pupton of pigeons. She accuses French cooks of stealing and fulminates that "*the blind folly of this age, that they would rather be impofed on by a French booby, than give encouragement to a good English cook.*"<sup>518</sup> There are also many recipes for ragout. The 1731 patriotic ballad "The Roast Beef of Old England," by Henry Fielding, mentioned earlier, which will also be discussed further in the literature section in this chapter, refers to the introduction of ragout from "all-vapouring France." It is also relevant that this French dish is spiced with pepper, mace, cloves, and nutmeg. Similarly, it is interesting that most of the other French dishes she chooses are also spiced. Whilst French cooking is being adopted, it is those spiced dishes that come through in the cuisine. Hence, despite her antipathy towards French cuisine and cooks, she includes numerous French dishes in her book.

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<sup>511</sup> *ibid*, p269

<sup>512</sup> *ibid*, p8

<sup>513</sup> *ibid*, p9

<sup>514</sup> *ibid*, p91

<sup>515</sup> *ibid*, p68

<sup>516</sup> *ibid*, p76

<sup>517</sup> *ibid*, p81

<sup>518</sup> *ibid*, p iii

Truffles are used in many recipes. It is unclear if truffles are cheap and affordable for a poor housewife (compared to modern-day prices) or if this means that the book is aimed at middle and upper-class women. She alludes to this in some ways, listing a recipe called “to roast a turkey the genteel way”, perhaps referring to the gentility involved.<sup>519</sup>

An interesting item emerges in a recipe on how to bake a calf’s head called “catchup,” which is not ketchup in modern usage. It is a bottled fish sauce made from stale beer, anchovies, shallots, mace, cloves, pepper, ginger, and mushrooms. Once made, this bottled fish sauce could be taken to the Indies. The entry occurs in Chapter XI, titled ‘For Captains of Ships,’ therefore these recipes are supposed to be long-lasting, able to survive sea journeys, and bring the taste of England to whichever corner of the world they sail to.<sup>520</sup> The recipe for a neck of mutton, “The bafty difh,” calls for a large dish, an inch deep on the inside with a fitted lid with a handle, which is called, interestingly, a “necromancer”. She mentions that the dish was first contrived by Mr Rich and was much admired by the nobility.<sup>521</sup> The international dimension is clear with Portugal beef, Portuguese rabbits, the French recipes, and Turkish ways to dress mutton. One dish, called A Pillaw of Veal, is made using veal, seasoned with pepper, salt and nutmeg, along with rice mixed with broth and mace.<sup>522</sup> This resembles almost any kind of pilau (or biryani) rice dish from a vast swathe across the Middle East, Central Asia and South Asia which includes flavoured, coloured rice with meat and cooked in layers. She suggests adding a pint of rich gravy and serving it with Seville oranges, obviously an addition not seen in these other regions. Still, pilau rice was common in the areas where EIC (this time established in or trading with these areas) employees enjoyed this dish. She mentions a recipe called “To make a pellow the Indian way” with mace, pepper, and cloves, suggesting adding bacon inside the rice—a typical English enhancement of the recipe, like the previously mentioned gravy.<sup>523</sup> The most famous recipe in her book is “To make a currey the Indian way” where she describes a recipe for curried chickens with turmeric. This is the first time that an English cookbook includes a specific Indian recipe with turmeric, not found before in any other English language cookbook.<sup>524</sup> Another similar dish from the Middle East and India is a mutton kebob, where spiced mutton (though not diced or minced as in the modern version) is cooked over a spit. She adds gravy and catchup is then poured over the Mutton Kebabs.<sup>525</sup> She also mentions Bologna sausages, talks about a recipe for a shoulder of veal a la Piedmontoife,<sup>526</sup> a German way of dressing fowls.<sup>527</sup>

The succeeding chapters were not included in the analysis as they did not relate directly to food: Chapter XXI: How to market the seasons of the year for butcher’s meat, poultry, fish, herbs, roots, and fruit as this relates to recognised meats and other elements in a kitchen, not really recipes; Chapter XXII relating to medicinal recipes. The Additions chapter was included where food recipes were mentioned. The appendix contains many additional recipes, mostly international in nature (Spanish, German, Dutch, Jewish), which were included in the analysis, showing a significant use of garlic compared with previous recipes. This provides the following spice usage:

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<sup>519</sup> *ibid*, p23

<sup>520</sup> *ibid*, p184

<sup>521</sup> *ibid*, p74

<sup>522</sup> *ibid*, p40

<sup>523</sup> *ibid*, p74-75

<sup>524</sup> *ibid*, 80

<sup>525</sup> *ibid*, p73-4

<sup>526</sup> *ibid*, p40

<sup>527</sup> *ibid*, p51

FIGURE 70 - HANNAH GLASSE, THE ART OF COOKERY – SPICE ANALYSIS -1747

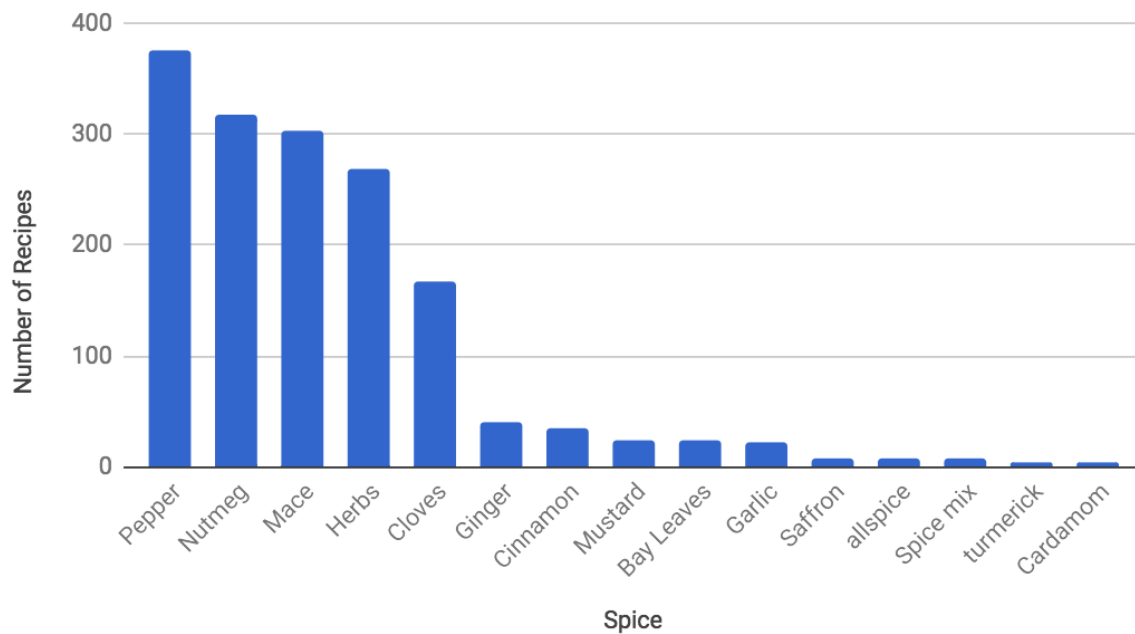


TABLE 18 - HANNAH GLASSE, THE ART OF COOKERY– SPICE ANALYSIS - 1747

Spice	Number	% Of recipes
Pepper	375	33.78%
Nutmeg	317	28.56%
Mace	304	27.39%
Herbs	268	24.14%
Cloves	168	15.14%
Ginger	40	3.60%
Cinnamon	35	3.15%
Mustard	24	2.16%
Bay Leaves	24	2.16%
Garlic	22	1.98%
Saffron	8	0.72%
Allspice	8	0.72%
Spice Mix	7	0.63%
Turmeric	4	0.36%
Cardamom	4	0.36%

As can be noted in Table 18 and Figure 70, there is a switch from Robert May's book: the most popular spice is now pepper rather than nutmeg. Herbs dropped down the list, whilst some novel items, such as turmeric and cardamom, appeared along with allspice. These are uniquely South Indian spices, indicating that the EIC is influencing English cuisine. As already mentioned, only 57 percent of the recipes have at least one spice (excluding usage of herbs) compared to 78 percent in May's book which indicates a significant drop in the use of spices. Moreover, the type of spices started to shift. As Flandrin notes about longer-term trends in spice usage around the mid-

seventeenth century: “Spices still figured in 60 to 70 percent of all recipes, however, a proportion just as high as the Middle Ages. But two changes are worth noting. First, the number of spices in common use had diminished considerably: long gone were galingale, grains of paradise, mace, spikenard, cardamom, anise, cumin, mastic, and the long pepper, while cinnamon, ginger, and saffron were rarely used...The only spices that continued in regular use were pepper, cloves, and nutmeg, and these were much more widely used than before.”<sup>528</sup>

This reduction in spice usage was further evidenced by a book published in 1750 by William Ellis titled *Country Housewife’s Family Companion*, which took a different and idiosyncratic perspective.<sup>529</sup> Unlike other authors referred to in this chapter, Ellis was a Hertfordshire farmer who interviewed his neighbours and others to author his book, which has no organisation or even page numbers. His book was explicitly rural, a counterpoint to other books focuses on aristocratic houses, the beginnings of French cooking, and an urban audience/household. He mentions how the farmer’s wife needed to “*preserve wheat, barley, oat meals, meat, root, fruits and herbs from the damage of insects*”, to pickle and distil, to “*manage sows and pigs, cows and fowls of several sorts,*” and to feed “harvest men” and maintain farmers and servants “the rest of the year.” He also refers to rich recipes, luxury puddings and rich pastries, but also includes one for, “a poor woman, her way to make fat go the farthest in making paste of barley-meal for pyes.” Given that spices were usually purchased from shops, Ellis strongly advises against frequenting shops because the shopkeepers will “*get all the Intelligence they can of your affairs, and if they are prejudiced against you, they will make an ill use of it, to your disadvantage*”. He also warns against adulteration.

Despite this, he has some recipes using spices. For example, the following baked pig recipe adds pepper, salt, cloves, mace, nutmeg, bay leaves, besides herbs. Note the interesting way of writing the recipe in the third person: “*Rabisha’s Way to Bake a Pig.--Scald it (say she) and slit it in the midst, flay it and take out the bones, season it with pepper and salt, cloves, mace, and nutmeg, chop sweet herbs fine, with the yolks of two or three new laid eggs, and parboiled currants; then lay one half of your pig into your pye, and herbs on it, then put in the other half with more herbs aloft on that and a good piece of sweet butter aloft upon all: —... John Murrell gives his printed receipt thus: To bake a pig, says he, cut it in quarters, season them with pepper, salt, and ginger, lay them in pye crust, and strew over them shred parsley and savoury, minced hard yolks of eggs, blades of mace, currants, sugar, and sweet butter*”...Again Rabisha says, “*To improve a pig pye, bone the flesh, and season it with nutmeg, pepper, salt, and chopt sage... The pig is to be laid in quarters, and over all put a few slices of bacon, cloves, butter, and a bay leaf or two; make the paste white and good, and after it is out of the oven, put in some sweet butter.*” His book is all about local produce and using locally sourced ingredients. Thomas Moufet, as noted by Thirsk, described carrots as aromatic and spicy around 1600, different from how they are defined today.<sup>530</sup>

A book by William Verrall, published in 1759, called *Complete System of Cookery. In which is let forth, A Variety of genuine RECEIPTS, collected from feveral Years Experience under the celebrated Mr de ST. Clouet, fometime fince COOK to his Grace the Duke of Newcafle*, takes a different tack and focuses on what the kitchen should contain.<sup>531</sup> It mentions that any self-respecting kitchen should have two boilers, a soup pot, eight small lidded stew pans of different sizes, two very large lidded stew pots, a frying pan, a couple of copper ladles, two or three large copper spoons, a

<sup>528</sup> Flandrin, Montanari and Sonnerfield, (1999), p408

<sup>529</sup> Ellis, (1750)

<sup>530</sup> Thirsk, (2009), pXV

<sup>531</sup> Verral, (1759)

slice or two, a pewter colander, three or four sieves, three copper cups to hold above half a pint, six smaller copper cups, two etamines for straining thick soups, three large wooden spoons, and several saucepans. Pepper mills, pestles, and mortars for spices and herbs are a must, as are graters and knives, along with sugar cutters and toasting forks.<sup>532</sup> The writing is very prescriptive, such as, *“In like manner, get all your garden things cut, pared, pick’d, and wafh’d out into a cullender; and amongft the reft before you provide a plate of green onions, fhallots, parfley, minced very fine; fine, pepper and falt always ready mixed, and your fpice-box always at hand....”*<sup>533</sup> The expectation is that the spice box will be to hand and have all the spices ready. Here, for the first time, we see the emergence of the common modern pairing of salt and pepper. Written in a chattier, informal style that lends itself to much longer text per recipe than the usual terse style of previous books, it does not have a separate list of ingredients and assumes some prior knowledge or unsaid tasks such as making pastry or sauces. The concept of marinating a day before cooking is starting to appear, such as in the *“Loin of Veal marinaded, with a brown fauce”* recipe, which marinades the veal in milk, green onions, shallots, parsley, spices, whole pepper, bay leaves, and coriander seeds. Coriander leaves are not used, but coriander is valued primarily for its seeds.<sup>534</sup> Interestingly, all the recipe headlines are first written in French, followed by an English translation. This suggests that French cooking had started to take root in cookbooks and in common kitchens. He mentions how his way of refined cooking clashed with common attitudes: *“While I was writing on, he interrupted me by asking what was meant by apparatus; here, this word says he (holding it to me to read). Why, sir, says I, it comprehends all necessary and useful things for dressing a dinner fit to serve a gentleman’s table, particularly your pretty little made dishes (what are generally called French dishes). Ump, says my old friend, I seldom eat anything more than a mutton chop, or so; but, however, ’tis all very well for them that like it.”*<sup>535</sup> This indicates that English tastes were beginning to move to simpler roasted meat dishes.

The *Diary of Parson James Woodforde*, which he kept for forty-five years, from 1758 until he died in 1803, offers insightful perspectives on what a professional middle-class Englishman would eat, as opposed to what was in the cookbooks. 19 April 1768: *“Dinner with Mrs Farr... a roasted shoulder of mutton and a plum pudding for dinner-veal cutlets, frill’d potatoes, cold tongue, ham and cold roast beef, and eggs in their shells. punch, wine, beer and cyder for drinking.”* “3 December 1776: My frolic [party] for my people to pay tithe to me was this day. I gave them a good dinner, surloin of Beef roasted, a Leg of Mutton boiled and plumb Puddings in plenty . . . They all broke up about 10 at night. Dinner at 2. Every person well pleased, and were very happy indeed... They drank of wine 6 Bottles, of Rum 1 gallon and half, and I know not what ale . . . Some dined in the parlour, and some in the kitchen. 17 dined etc that paid my tithe . . . We had many droll songs from some of them . . .” 26 November 1790: *A poor fellow from Windham (who looked exactly as if he had come out of jail, a young fellow, short with black hair, a very dirty shirt, a short kind of brown great coat and kitty-boots) came to the back door and begged for some victuals. I gave him a part of a rost neck of veal and bread. He might be, and I hope he is a very honest fellow, but his appearance was much against him.”*<sup>536</sup>

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<sup>532</sup> *ibid*, pIII

<sup>533</sup> *ibid*, pXXIV

<sup>534</sup> Thirsk, (2009), p284

<sup>535</sup> Verral, (1759), pXVI

<sup>536</sup> Woodforde and Beresford (ed.) (2011)

These recipes, recognised in Hannah Glasse's cookbook or other then-extant cookbooks, were normally meat-based dishes with some herbs and nutmeg, pepper and occasionally mustard. Desserts included cinnamon-infused recipes. The next book, *The Experienced English House-Keeper*, by Elizabeth Raffald, was first published in 1769. It went to twelve official editions and countless pirated ones.<sup>537</sup> She was a housekeeper for many of the nobility. Her recipes were copied by Queen Victoria into her diary, and then Elizabeth ended up opening a shop in Manchester selling food and confectionery.<sup>538</sup> Containing some eight hundred recipes, it covers ground like Glasse's book, although with a bit more emphasis on richer recipes, given that she was cooking for an aristocratic household, written from the perspective of the housekeeper giving instructions to the cook. As before, it does not contain ingredients (one of the main reasons why this book was not considered for deeper analysis despite its popularity). It has the first recipe for a wedding cake and references how to barbeque food. There is a heavy emphasis on French cuisine, although she does not express anti-French sentiments as Hannah Glasse did. Despite that, she feels that anti-French sentiment is important enough to write about rather defensively in the preface: "*Though I have given some of my dishes French names, as they are only known by those names, yet they will not be found very expensive, not all add compositions but as plain as the nature of the dish will admit of*". (Raffald, (1969), pIII) The number of spices used, such as mace, pepper, nutmeg, and cloves are higher than in Glasse's book, but both books are similar in approach and coverage.

A book by Dr. Theophilus Lobb called *Advice to the Poor with regard to Diet* published in 1763, which went into two editions, provided a different perspective: how a doctor thinks about diet and the poor. It recommends how to pick and preserve fruit, discusses diet and basic recipes for the poor, aiming to produce meals costing no more than two pence.<sup>539</sup> Lobb suggests that the food cupboard should contain cereals, beans, peas, milk, butter, cheese, salt, ginger, pepper and sometimes meat or fish. Lobb links his nourishing and healthy diet advice to his reading of a book by the Reverend Edward Terry, who explores Indian diets at the time of Sir Thomas Roe, the EIC ambassador to the court of Jehangir, the Great Mogul. For him, spices were to be used commonly, despite the high prices.<sup>540</sup>

A book by Ann Peckham called *Complete English Cook or Prudent Housewife* appeared in 1767 and echoed Hannah Glasse's anti-French sentiments, stating: "*The following collection of receipts .... is not stuff'd with a nauseous hodge-podge of French kickshaws, and yet the real delicacies of the most sumptuous entertainments are by no means neglected*."<sup>541</sup> This clearly indicates that French cuisine was associated with entertainment; hence, the author was at pains not to be French cuisine-orientated while not forgetting the rich and entertainment-related recipes. Despite this, she provides recipes such as To roast WOODCOCKS the French Way,<sup>542</sup> To fteew RABBETS the French Way,<sup>543</sup> To make French Mackaroons,<sup>544</sup> and To make French Pye.<sup>545</sup> This book

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<sup>537</sup> Raffald, (1769)

<sup>538</sup> URL:<http://www.bbc.co.uk/news/uk-england-22048430>. Accessed: 2018-01-28. (Archived by WebCite® at <http://www.webcitation.org/6wokAwJ3A>)

<sup>539</sup> Lobb, (1763)

<sup>540</sup> Thirsk, (2009), p163

<sup>541</sup> Peckham, (1767)

<sup>542</sup> *ibid*, p77-78

<sup>543</sup> *ibid*, p85

<sup>544</sup> *ibid*, p123, 215

<sup>545</sup> *ibid*, p212



has significantly less use of spices compared with Glasse's and has pages of recipes without mention of spices.

A book with a distinct perspective written by John Farley, *The London Art of Cookery and Domestic Housekeeper's Complete Assistant*, was first published in 1783 and became popular enough to go into several editions.<sup>546</sup> John Farley was the head cook at the London Tavern in Bishopsgate, where a vast number of diners ate on a grand scale, with live turtles kept in the cellar.<sup>547</sup> Whilst one expected the book, written by a tavern cook, to be aimed at a different audience, he aimed at the same audience as Hannah Glasse, going as far as copying significant portions of her book. His book is in four parts, each part divided into multiple chapters covering assorted topics ranging from marketing, boiling, roasting, frugal dishes, sauces, potting and pickling. He tries to provide some household guidance by including hints on domestic economy, describing the duties of various servants in the household, from housekeeper to laundry maid to footman.<sup>548</sup> In the introduction, he mentions how "*spices such as ginger, cinnamon, pepper, cloves and nutmegs, by degrees, came into practice and the whole art of cookery gradually improved till it reached its present perfection...The introduction of trade and commerce into Europe soon made us acquainted with the products of other countries, and rich fruits and spices imported from the most remote regions of the globe were soon sought after with avidity.*"<sup>549</sup> His book is clearly based on the assumption that spices were imported and used as a matter of course. Based upon a simple search technique for the words nutmeg, pepper, cinnamon, and mace, the number of spices suggested in this book is like those in Glasse's book. He mentions quite a lot of French recipes, although the anti-French sentiment is absent. His recipe for *French Beans Ragooed*, for example, is quite spiced with cloves, mace, nutmeg, and pepper.<sup>550</sup>

In 1788, John Trusler published his book *The Honours of the Table*, which focused more on the business of dining rather than cookery, the behaviours thereof, procuring provisions, etc.<sup>551</sup> The book is quite prescriptive on what constitutes good behaviour on the part of the diners (not eating too quickly or slowly, smelling the meat before eating, no scratching of any body part at the table, nor blowing one's nose, arriving on time, etc.). He indicates what the behaviours should be around the condiments, such as item 7 for what a good servant should do: "*To hand the decoraments of the table viz. oil, vinegar, muftard, to thofe who want, anticipating even their wifhes. Everyone knows with what muftard is eaten, with what vinegar, and fo on, and a diligent, attentive fervant, will always hand it, before it is afked for*".<sup>552</sup> A section of the book shows how to carve and offers some quite scientific drawings with clear directions on where to start and where to end on the various cuts, joints, and meat pieces.

This ends this analysis phase, as this was the last major cookbook published in the eighteenth century. In conclusion, it is evident that spice usage in cookbooks changed over the centuries. The top two spices down the centuries in the analysed books are.

1. Forme of Cury (1390) AD: saffron and ginger
2. The Good Huswifes Jewell by Thomas Dawson (1585) AD: ginger and pepper

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<sup>546</sup> Farley, (1783)

<sup>547</sup> Hope, (2011), p76

<sup>548</sup> Farley, (1783), p82-8

<sup>549</sup> *ibid*, p8

<sup>550</sup> *ibid*, p177

<sup>551</sup> Trusler, (1788)

<sup>552</sup> *ibid*, p12

3. The Accomplisht Cook by Robert May (1660) AD: nutmeg and mace.
4. The Art of Cookery by Hannah Glasse (1747) AD: pepper and nutmeg

One of the reasons why saffron could have dropped from the top spot could be the progressive decline in saffron cultivation in England, meaning that saffron had to be imported from long distances. Its use for flavouring and colouring could also have fallen out of favour, as cheaper alternatives such as turmeric could be used, or it could be just that tastes changed. As the timing shows, from the 1500s onwards, imported spices such as pepper, nutmeg, and mace all start emerging in the top ranks in sufficient quantities and at reasonably affordable prices for cookbooks to refer to them with frequency. The increased use of nutmeg, especially when combined with the prevalence of nutmeg graters, indicates that nutmeg became a convenient way to show off personal wealth, food knowledge and improved social interactions. Grated/ground nutmeg also lends itself to being sprinkled on drinks/food, as well as being an ingredient, hence its popularity. Mace and ginger are not that ambulatory or conducive to this kind of cultural association.

The use of spices also progressively reduced as social and economic conditions changed, literacy improved, the range of cookbooks expanded widely, and the influence of foreign cuisines and ingredients increased. The next section analyses how spices were represented in art.

### **3.5. Spices in food-related art, kitchens & tableware**

Here, the representation of spices in food-related art is analysed by adopting the Nygard methodology as described in the methodology section of Chapter 1.<sup>553</sup> The analysis is broadly clustered around paintings and etchings, kitchens and kitchen furniture, tableware and other items relating to spices.

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<sup>553</sup> Nygard, (2013)

FIGURE 71 - GASCOIGNE'S NOBLE ART OF VENERIE OF HUNTING, 1575



Figure 71 from George Gascoigne's *Noble Art of Venerie or Hunting* shows Elizabeth I enjoying a picnic in a glade while food and drink are proffered.<sup>554</sup> George mentions "*deintie drinkes*", "*winne*", "*colde Loynes of Veale, colde Capon, Beefe and Goose*", "*pygeon pyes, and Mutton Colde*", "*Neates tongs and Gambones of Hogge*", "*saulsages and savery knackes*". These were well spiced, as were the recipes in the contemporary *Accomplisht Cook* by Robert May, especially concerning sauces for beef, veal, pork, fowl, and birds.<sup>555</sup> The wine or ale on the bottom right, poured from a wine bag or from the casks, could also be well spiced.

<sup>554</sup> Gasgoine, Tuberville, and du Fouilloux, (1575), p92

<sup>555</sup> May, (1660), p82

FIGURE 72 - WILLIAM HOGARTH, THE SHRIMP GIRL, 1745



William Hogarth painted *The Shrimp Girl* in 1745, shown in Figure 72.<sup>556</sup> Contemporary sources recommended shrimps be eaten simply with a squeeze of lemon and a dash of freshly ground pepper. Robert May's recipes list seafood sauces containing mustard, verjuice, cinnamon, and ginger.<sup>557</sup>

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<sup>556</sup> Hogarth, William. (1740-45)

<sup>557</sup> Riley, (1977), p119



FIGURE 73 - THE FIGHT BETWEEN CARNIVAL AND LENT, PIETER BRUEGEL, 1559



Two festivals were particularly associated with food. Shrovetide was associated with meat and Lent with fish. This period was the transition between two seasonal cuisines where livestock that was not meant to be wintered was slaughtered: hence the season of plenty of meat. As Lent progressed, with abstinence and purification, the butcher shops closed, and only fish was available. In both cases, spices were used liberally in numerous dishes. Whilst the painting in Figure 73, by Pieter Bruegel the Elder, from 1559, depicts a Flemish scene, not an English one, this religiously mandated food-related behaviour was common in Northern Europe.<sup>558</sup> Showing the Carnival/Shrovetide and Lent processions at the same time, one can observe meat preparation on the left and fish preparation on the right, towards the bottom.<sup>559</sup> Each of these preparations was heavily spiced, as referred to in the contemporary Dawson book.<sup>560</sup> The large man representing Carnival is riding a beer barrel with a pork chop attached to the front. He wears a meat pie as a hat and is wielding a long spit with meat. That is on the Carnival side; the Lent side is full of starving people, eating fish, with Lent being the emancipated woman seated on a plain chair, with a beehive for a hat (representing the Church) and holding a broiling iron with two fish (symbol for abstinence for the Lenten fast). Lichtert sees the similarities with Antwerp and other towns. Antwerp was a major spice trading hub and English merchants, sailors and other well-to-do travellers passed

<sup>558</sup> Bruegel, Pieter the Elder (1559)

<sup>559</sup> The OED defines Carnival as a mid-Sixteenth century: from Italian carnevale, carnovale, from Medieval Latin carnelevamen, carnelevarium 'Shrovetide', from Latin caro, carn- 'flesh' + levare 'put away'.

<sup>560</sup> Dawson, (1585)

through these scenes and locations. The town hall and the surrounding are representative of most Northern European towns with inns, churches, open spaces, marketplaces, and guilds.<sup>561</sup>

FIGURE 74 - UNKNOWN ARTIST, WILLIAM BROOKE & HIS FAMILY, 1567



The painting *William Brooke, 10th Lord of Cobham, and his Family*, shown in Figure 74, from 1567, is by an unknown artist of the British School.<sup>562</sup> It shows his children with fruit, sweetmeats, and wine on the table. While most of the plates have fruit, the plate on the right seems to have some form of sugary confection, which was spiced. The gold wine cup in the middle of the table would be watered down for the children but would usually be spiced. The implement to the left of the fruit bowl could be a spice grinder, for example, grinding nutmeg to sprinkle over the cut fruit. James and van der Stighelen point out that the adults are not eating, hence this is a setting for children, which explains the lack of elaborate spread of meals as would be expected at the table of Lord Cobham. They suggest that the preponderance of fruit on the table is indicative of Christian symbols of chastity (apples or cherries), grapes (future passion of Christ), fertility and love (walnut).<sup>563</sup>

<sup>561</sup> Lichtert, (2014), p83-96

<sup>562</sup> Anonymous, (1567)

<sup>563</sup> James and van der Stighelen, (2016), p66-101



FIGURE 75 - PORTRAIT OF SIR HENRY UNTON (1558-1596)



The painting in Figure 75 is the *Portrait of Sir Henry Unton* (1558-1596) by an unknown artist from circa 1596.<sup>564</sup> Painted posthumously upon being commissioned by his wife, it shows his life in a very unusual narrative way, starting from the lower right-hand corner and then moving anticlockwise around the painting. His birth, his studies at Oxford, his travels, campaigning in the Netherlands, his ambassadorial career, the siege at La Fere, and then his death followed by his funeral and tomb. In the centre it shows his life at Wadley House, whilst he is in the study, musical endeavours, and presiding over a banquet. It is this last element that is of interest.<sup>565</sup>

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<sup>564</sup> Anonymous, (1596)

<sup>565</sup> URL:<https://www.npg.org.uk/research/programmes/making-art-in-tudor-britain/case-studies/the-portrait-of-sir-henry-untion-c.-1558-1596.php>. Accessed: 2017-09-24. (Archived by WebCite® at <http://www.webcitation.org/6tiTzjlvq>)

FIGURE 76 - DINING TABLE SECTION OF PORTRAIT OF SIR HENRY UNTON (1558-1596)



One element shows him at a banquet (enlarged section in Figure 9764). The presence of the musicians along with dancers and minstrels indicates that this is the final and third course of the banquet, which was usually taken in another room.<sup>566</sup> The food on the table would be highly spiced sweet meats and desserts, along with spiced wine and sauces, which can be seen served on the table at the top right-hand side. The kitchen staff uses the serving window to pass the dishes through, with the sauces being poured over the meats/fish as appropriate.

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<sup>566</sup> Paston-Williams, (2021), p7



FIGURE 77 - JORIS HOEFNAGEL, THE FETE AT BERMONDSEY, 1569



Joris Hoefnagel, a Dutchman, painted the *Fete at Bermondsey* around 1569, as seen in Figure 77, taking the viewpoint from the middle of today's Cluny Estate on the corner of Long Lane and Bermondsey Street.<sup>567</sup> One can see St. Mary Magdalen's Church on the right and The Tower of London in the far distance on the left. The four large pies in the bottom right-hand side could be bridal pies, which are the ancestors of the wedding cake, if the scene is that of a wedding, or just large pies for the celebration. Certainly, the rich clothing indicates an event of some form, with musicians on the right. Pies, as the contemporary cookbooks note, used to be spiced.<sup>568</sup> There is a server bringing out wine which could also be spiced. Additionally, a server is bringing out a covered dish, which would have meats with spiced sauces. The kitchen shows how the server uses a long-handled pie dish for the pies and there is an inclined spit with meat turning on it. The person inside the kitchen seems to be cutting the pie into pieces or pouring sauces (spiced). A half pie is on the counter. An L-shaped banqueting table has been laid out next to the kitchen with table decorations, meaning it was set up for the feast.

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<sup>567</sup> Hoefnagel, Joris, (1569)

<sup>568</sup> Dawson, (1585), p11

FIGURE 78 - CHARLES I DINING IN PUBLIC, GERRIT HOUCHEEST, 1635



Figure 78 shows a painting by Gerrit Houchgeest.<sup>569</sup> It is called “*Charles I, Queen Henrietta Maria, and Charles II when Prince of Wales Dining in Public*” dated 1635. One can see how the servants are carrying dishes from the archway on the right while being overlooked by observers behind the balustrade. Given the royal nature of the dinner, the dishes will be highly spiced. The painting does not show clearly what is on the table. Royalty around this time started to become more private. While James I was prone to public entertainment, Charles I and his descendants started to dine increasingly in private. The painting above also shows this behaviour. Would the fact that dining was becoming more private mean that the dishes did not need to be so flamboyant or the spread so large to impress the onlookers?

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<sup>569</sup>URL:<https://www.royalcollection.org.uk/collection/402966/charles-i-queen-henrietta-maria-and-charles-ii-when-prince-of-wales-dining-in>. Accessed: 2018-06-25. (Archived by WebCite® at <http://www.webcitation.org/70RIFxeuv>)



FIGURE 79 - WILLIAM HOGARTH, THE MARCH OF THE GUARDS TO FINCHLEY, 1750



Another pie reference is by William Hogarth (1679-1764), who painted *The March of the Guards to Finchley* in 1750, seen in Figure 79.<sup>570</sup> One of the main figures in the painting is the pie man to the front right. Pie men wandered along urban streets with their platters full of pies on their heads. One could argue that it allowed people inhabiting the second and higher stories in built-up areas see the pies even if they were unable to hear the pie man's cries.

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<sup>570</sup> Hogarth, William, (1750)

FIGURE 80 - PIEMAN ENGRAVING- 1885



This Pie man figure was copied and circulated widely. Figure 80 shows an engraving of the same character selling pies, which were spiced with pepper, mace, and nutmeg.<sup>571</sup>

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<sup>571</sup> Hindley, (1885), p214

FIGURE 81 - PAUL SANDBY, BUY MY MUFFINS C1759



Figure 81 is an illustration by Paul Sandby, "*Buy my Muffins*" about 1759.<sup>572</sup> These muffins are not the commonly known American cake-based muffins known today, but traditional, small, round, flat, yeast-leavened bread, baked upon a baking stone over the fire, which were traditionally sliced horizontally, toasted, and buttered. Sometimes they contained cinnamon for special occasions and were frequently topped by sweet (honey or jam) or savoury (eggs, sausages, bacon, cheese spiced with pepper, nutmeg, or mace) covering.<sup>573</sup>

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<sup>572</sup> Shesgreen, (2002), p122

<sup>573</sup> Ray, (1848), p425



FIGURE 82 - WILLIAM CRAIG, HOT SPICED GINGERBREAD, 1804

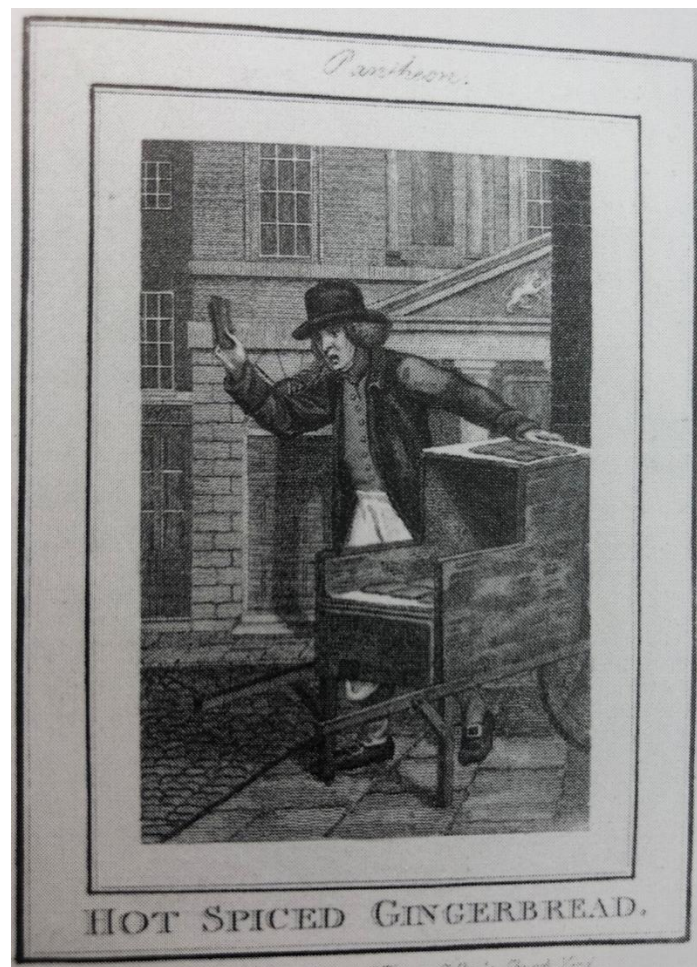


Figure 82 is a woodcut dating to 1804 by William Marshall Craig, called "*Pantheon, Hot Spiced Gingerbread*".<sup>574</sup> As the name suggests and as discussed earlier, Gingerbread was made with spices.

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<sup>574</sup> Shesgreen, (2002), p160

FIGURE 83 - STILL LIFE BY PIETER VAN ROESTRATEN 1695



Figure 83 shows the *Teapot, Ginger Jar and Slave Candlestick* painting by Pieter van Roestraten (1629-1700) in London, 1695. Such still life paintings were popular in England. This one shows a large ginger jar on the left. It is not necessary that the jar contained ginger; it could also be just an ornamental object.<sup>575</sup>

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<sup>575</sup> Roestraten, Pieter van, (1695)

FIGURE 84 - HOUSEKEEPER'S INSTRUCTOR BY WILLIAM HENDERSON, 1790



The illustration in Figure 84 of a *Georgian Kitchen* is from the frontispiece to the *Housekeeper's Instructor* by William Henderson published in 1790.<sup>576</sup> There are two interesting aspects to this frontispiece. The first is that one can make out spice mills on the mantelpiece above the fireplace. The second is the fact that there is an open cookbook or recipe book on the table in front. It could well be that this is a carving instruction book, and the butler is asking the carver to carve the bird in a particular way. This indicates that use of cookbooks in the kitchen was quite common, although given the number of kitchen staff, this household would most probably be quite wealthy. On the left-hand side, one can see the serving hatch with a kitchen lad holding a covered dish. Food cooked would be taken to the serving hatch and spiced sauces poured over the meats or fish as appropriate.

<sup>576</sup> Henderson, (1790)



FIGURE 85 - A PROSPECT OF THE INSIDE OF WESTMINSTER HALL, 1790



The engraving in Figure 85 titled “A Prospect of the Inside of Westminster Hall, Shewing how the King and Queen with the Nobility and Others did sit at Dinner on the Day of the Coronation” shows the interior of Westminster Hall depicting the banquet following the coronation of James II on April 23<sup>rd</sup>, 1685 in a book by Francis Sandford.<sup>577</sup> The banquet was furnished by the King’s own master cook, Patrick Lamb, whose cookbook, *Royal Cookery*, appeared in 1710.<sup>578</sup> The caption says that the first course of hot meat was served to their Majesties’ Table. If the recipes in the lamb cookbook are anything to go by in the menus noted by Sandford, the food served at the banquet would be significantly spiced. There were 1,445 dishes ranging from pistachio cream, anchovies, jelly, crayfish, bologna sausages, collops and eggs, rabbit, pickled oysters, Portuguese eggs, mushrooms, beef, veal, hogs’ tongues, cheesecakes, asparagus, salmon, pheasant, pigeon, chicken, artichokes, lamb, bacon, and pig.

<sup>577</sup> Sandford and King, (1687)

<sup>578</sup> Lamb, (1710)

FIGURE 86 - PIETER CLAESZ, TABLETOP STILL LIFE, 1625



Pieter Claesz (1597-98 - 1660) painted still life's showing gastronomic themes, two of them are shown in Figures 86/87, the first depicting a *Tabletop Still Life with Mince Pie and Basket of Grapes* from 1625, whilst the second is the *Still life with Turkey Pie* from 1627.<sup>579</sup>

FIGURE 87 - PIETER CLAESZ, STILL LIFE WITH TURKEY PIE, 1627



<sup>579</sup> Claesz, Pieter, (1625)



Both types of pie were extremely popular during the feast days on the continent as well as in England. These pies contained spices, as shown in extant cookbooks.<sup>580</sup> Soon after these paintings were completed, Cromwell's Long Parliament sought to ban all such feasts and celebrations (see next section).

Figure 88 shows a painting called *The Anglers Repast*.<sup>581</sup> It was painted by George Morland around 1789, showing several types of meats (which were spiced and herbed) and bread displayed on the white cloth. A bottle is exchanged or handed over by the person on the boat to the person on the shore; it could be a spiced ale.

FIGURE 88 - THE ANGLERS REPAST, GEORGE MORLAND, 1789



This concludes the review of the mentions of spices and related food items in paintings and other printed art material. Additionally, spices, given their expensive and rare character, had special places in the kitchen and needed special kitchen implements to use them, which will be shown in the next section.

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<sup>580</sup> May, (1660), B6v, B7v

<sup>581</sup> Morland, George, (1789)

FIGURE 89 - TUDOR KITCHEN REPRESENTATION (1485-1603)



Figure 89 shows a representation of a Tudor kitchen.<sup>582</sup> On the second shelf from the top left, one sees a spice box with a pepper or spice mill next to it.

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<sup>582</sup> The images in Figures 44 & 45 are taken from the National Education Network site which displays images on a variety of topics for educational use. <http://gallery.nen.gov.uk/image655393-.html>, archived at <http://web/20201018175255/http://gallery.nen.gov.uk/image655393-.html>, accessed 18/10/2020

FIGURE 90 - TUDOR KITCHEN WITH A SPICE MILL (1485-1603)



Figure 90 shows a spice mill on a shelf.<sup>583</sup> Spice mills are explored in detail later in this chapter.

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<sup>583</sup> [http://gallery.nen.gov.uk/asset90398\\_2456-.html](http://gallery.nen.gov.uk/asset90398_2456-.html), archived at [http://web/20201018175147/http://gallery.nen.gov.uk/asset90398\\_2456-.html](http://web/20201018175147/http://gallery.nen.gov.uk/asset90398_2456-.html), accessed 18/10/2020



FIGURE 91 - TUDOR ERA KITCHEN CANONS ASHBY, NORTHAMPTONSHIRE, 1550



Figure 91 depicts an example of a Tudor era kitchen at Canons Ashby in Northamptonshire built in 1550.<sup>584</sup> The kitchen shows grinders, weighing machines, preserves and other utensils used for spices and other items. The cooking implements improved, with the appearance of wood-fired cooking ranges, spits, and flues rather than the open-fire cooking used earlier to prepare food.

FIGURE 92 - SPICE CUPBOARD 1650



Figure 92 shows a carved lockable spice cupboard made in Yorkshire by an unnamed artisan around 1650-1660.<sup>585</sup> Carved with tulips on the front, it has many compartments for spices. More importantly, given the expensive nature of the spices, it was lockable, to be kept in the pantry or in

<sup>584</sup> Richardson, (2015)

<sup>585</sup> Anonymous, (1650)

the kitchen. The two shelves are not necessarily shelves; they could have been fitted with wide drawers with internal compartments. The carrying handles are unique, as these spice cupboards were usually mounted on the wall.

FIGURE 93 - ENGLISH OAK BOARDED MURAL SPICE CUPBOARD (1600-1700).



Figure 93 is another example of an English oak-boarded mural spice cupboard (1600-1700). One can see the iron hanging hooks on the top, at the back of the triangular top piece, with which the cupboard was hung on a wall. It was hung to ensure the precious contents were safe from mildew, damp, and vermin, though the open carved door is a rarity.<sup>586</sup> The lock is required as noted above because of the expensive nature of the contents.

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<sup>586</sup> Chinnery, (1979), p331

FIGURE 94 - COOKS CLOSET, CALKE ABBEY, DERBYSHIRE – SEVENTEENTH CENTURY



Figure 94 shows an example of a seventeenth-century oak spice cupboard in the cook's closet at Calke Abbey, Derbyshire. It shows how it was hung up on the wall and had a lockable door.<sup>587</sup> This also supports and provides physical evidence that Christian houses of worship in England also had expensive spices, which were used in day-to-day cookery. Material culture theory helps to provide a framework to analyse the spice cupboards following Griswold definition that cultural objects are "shared significance embodied in form".<sup>588</sup> As one can see from the examples given above-these were quite heavily carved and expensive units compared to other kitchen storage objects. The curious element is that the people who will be looking at this cupboard are not the rich people or the guests but the kitchen staff, who presumably would not need to be impressed, but still the owner of the house would want a highly carved, expensive piece of storage to store their spices. The lock will separate the common workers from the person who holds the key and provides a ceremonial element to the unlocking of the cupboard, taking out the inner sections, sniffing/feeling the spices to measure potency/freshness, measuring out the spices for the cooking and then closing the door. Similarly, the loading of the cupboard with fresh spices would also be ceremonial in nature. The next items to be analysed are casting bottles.

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<sup>587</sup> Paston-Williams, (2012), p167

<sup>588</sup> Griswold (1986), p5



FIGURE 95 - ENGLISH CASTING BOTTLE 1535-60



Figure 95 shows an example of an English casting bottle.<sup>589</sup> These were quite popular in early modern times and were meant for keeping and sprinkling aromatic substances such as perfumes or oils, both of which contained spices. This example was made circa 1535-40, from agate, mounted in silver gilt. Queen Elizabeth I is reputed to have owned many bottles as part of her 1574 inventory. She has also been painted numerous times with such bottles hanging from her outfits. Dugan explains how rose perfumes became a staple of Henry VIII's personal image and that personal sponsorship of perfumes encouraged their use even further, mixed with other ingredients such as oranges and sweet-smelling herbs such as gilly flowers and mint. Henry VIII popularised the gifting of perfumes and casting bottles. His personal apothecary also distilled essential oils. Dugan mentions one of Henry VIII's perfumes calling for six spoonsful of rosewater along with grains of musk, ambergris, civet, and cloves.<sup>590</sup> Despite further searches, it was impossible to identify any more casting bottles held in English museums or collections. The next spice-related objects to be explored are spice dishes. These dishes frequently contained spices in powdered form. They were kept on the table, to be used as a top-up if the diner felt any need for it. Spice dishes were also used to present sweets (spiced) at the end of the meal. As such, they were highly ornamental, as they were present throughout the meal or at important events.

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<sup>589</sup> Anonymous, (c1535-40)

<sup>590</sup> Dugan, (2011), p42-69

FIGURE 96 - SPICE DISH, ROGER FLINT, 1573-74



Figure 96 shows an example of a spice dish dating to 1573-74, made in London by Roger Flint.<sup>591</sup> These dishes were used for sweetmeats, expensive spices, or sugar at the end of the meal. Given the lack of wear and tear, these were display pieces-kept in a sideboard just for show. The expensive ingredients and the highly worked piece were intended to show off the owner's wealth and status. The V&A Museum entry suggests that the piece could have been owned originally by William Cecil, first Lord Burghley, Lord Treasurer, and chief adviser to Elizabeth I. He was one of the richest and most accomplished patrons of the arts of the sixteenth century.

FIGURE 97 - PAIR OF SPICE DISHES, MULBERRY, 1600-1800



Not all spice dishes were fancy and expensive. Some spice dishes were made of wood and could be repaired as well (in this case with metal rivets and bands, as seen in Figure 97), indicating

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<sup>591</sup> Flint, Roger, (1573-74)

that a poor household valued them. Dating to 1600-1800 by an unknown maker, the wood is mulberry and was repaired with a metal staple. The repairs show that the dishes did not contain liquid but were used for either sweetmeats or larger-sized spices such as salt crystals or nutmegs. The dishes are small, 2 inches in height and 4.375 inches in diameter.<sup>592</sup>

The next type of spice-related objects are spice boxes, made to hold spices during travels or for the convenience of having a smaller box holding spices kept on the kitchen countertop or locked away safely until needed for cooking. These were obviously used in much smaller quantities or in smaller households.

FIGURE 98 - SPICE OR COMFIT BOX, UNKNOWN MAKER, 1630



The object shown in Figure 98 is a spice or comfit (type of confectionery) box crafted in a unique geometrical shape, meant for travelling. English in provenance, it was made of silver in 1630.<sup>593</sup> The lid is on the top third of the box.

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<sup>592</sup> Anonymous, (1600-1800)

<sup>593</sup> Anonymous, (1630)

FIGURE 99 - CANTEEN SET, THOMAS TYSOE, 1690



Figure 99 shows an example of a travelling set for a rich traveller, originally containing a spoon, fork, knife, nutmeg grater, a spice box, and corkscrew inside a beaker. Made in London around 1690 by Thomas Tysoe, it has a wooden frame inside to hold the cutlery. During this period, cutlery was normally not provided by the hosts and thus one either had to use one's hands and fingers or bring one's own. The V&A Museum entry notes that the set also included a nutmeg grater, a spice box, and a corkscrew, but they are no longer extant.<sup>594</sup> Examples of nutmeg graters are given below.

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<sup>594</sup> Thomas Tysoe, (1690)



FIGURE 100 - SPICE BOX, UNKNOWN, 1695



Figure 100 shows a brass spice box from a travelling set dating to 1695 that is engraved with the arms of Fowle with the initials IF.<sup>595</sup> The owner, obviously a wealthy person, travelled frequently and was interested enough in food to have this spice box made especially and get it engraved with his initials.

FIGURE 101 - WOODEN SPICE BOX, UNKNOWN, 177-1800



This turned and painted wooden spice box, shown in Figure 101, was made in England around 1770-1800 and has four compartments labelled with the names of the spices. The facing

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<sup>595</sup> Anonymous, (1695)

compartment is labelled as clove (the C is missing). In the middle, one can see a spice grater, which was usually used to grate nutmeg. The grater is inside a removable unit.<sup>596</sup>

The next set of spice-related objects explored are condiment or cruet sets. Condiment sets are different from spice dishes or boxes. They are usually similar looking, separate and discreet containers of sauces, oils, condiments, and spices, which may or may not be in a structure keeping them together, such as a stand (to stop them from falling over or breaking), and are usually kept permanently on the table.

FIGURE 102 - THE STOKE PRIOR DOUBLE SALT, UNKNOWN, 1594-1595



Figure 102 shows *The Stoke Prior Double Salt Container*, made in London around 1594-1595, silver gilt, chased and engraved.<sup>597</sup> It is in three parts. The top part with a pierced cap would hold ground pepper or nutmeg. The lower, larger part would be filled with salt and placed in front of the

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<sup>596</sup> Anonymous, (1770-1800a)

<sup>597</sup> Anonymous, (1770-1800b)

guest of honour, while the smaller middle part would be placed on the other side of the table, again filled with salt.

FIGURE 103 - CONDIMENT SET, JOHN LINNELL DESIGNER, 1758-1759



A set of three silver condiment vases is shown in Figure 103. They would have mustard, sugar, and pepper but could also contain red and black pepper instead of mustard and pepper. The wide bowl would be the sugar bowl. This item was made in London in 1758-1759 by Arthur Annesley and designed by John Linnell.<sup>598</sup> The pagoda shapes reflect a Chinese influence.

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<sup>598</sup> Linnell, J (designer), and Arthur (maker) Annesley. (1758-1759)



FIGURE 104 - CRUIT SET, WILLIAM DUESBURY & CO, 1765-1770



Figure 104 shows a cruet/condiment set in a wooden stand with a set of cruets of enamelled and gilt porcelain bottles with tops. It was made in Derby around 1765-1770 by William Duesbury & Co. They are pear-shaped with the names of the contents, Oil, Vinegar, Sugar, Mustard, and Pepper painted on.<sup>599</sup> The liquid bottle tops are stoppered, whilst the dry materials of sugar, mustard and pepper have pierced screw tops.

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<sup>599</sup> Anonymous, (1765-1770)

FIGURE 105 - CONDIMENT VASES, PAUL DE LAMERIE, 1749-1750



A set of silver condiment vases used to serve mustard, sugar, and pepper, in the form of classical vases, dating to 1749-1750, is shown in Figure 105.<sup>600</sup> These were made by Paul de Lamerie in London. Huguenots, forced to leave France after 1685, brought their silversmith skills with them to England, thereby improving the local standards and promoting new forms of tableware such as soup tureens and sauce boats.

FIGURE 106 - PAIR OF GINGER JARS, CHINA MADE IN 1700, 1810-1830 MOUNTED



Ginger jars were used to store ginger, but slowly the term expanded to encapsulate almost any kind of jar. These porcelain jars were originally imported from China, containing ginger once the sea route was opened by the Portuguese and then Dutch and English merchants. Later they were also manufactured in Europe and England. Figure 106 shows a pair of such ginger jars made around 1700 in China and then mounted on gilt bronze mounts in London around 1810-1830.<sup>601</sup>

<sup>600</sup> Lamerie, Paul de, (1749-1750)

<sup>601</sup> Anonymous, (1700) made, (1810-1830) mounted

Spice mills are handheld units made of wood and constructed in such a way that spices, usually salt, pepper, cloves, mace, dried herbs etc. could be ground by turning the screw and then capturing the ground spice in a container below.

FIGURE 107 - PEPPER MILL, MARY ROSE, ~1545



The Mary Rose, pride of the Tudor Fleet, was commissioned in 1511 and sank in battle in 1545 in Portsmouth. It was raised in 1982 and among the items recovered from the wreck was this pepper mill, seen in Figure 107, along with bags of pepper.<sup>602</sup> The top part was the pestle grinding against the second bowl-shaped part (it could have metal grinding plates, but none of the metal parts have survived). The ground pepper would fall into the bottom collecting cup locked into the middle part via a locking flange. This could be used for grinding pepper, cloves, or nutmeg.

FIGURE 108 - SPICE MILL, UNKNOWN, 1660-1700



The spice mill in Figure 108 was made in England in 1660-1700 out of turned wood.<sup>603</sup> The upper part is perforated. It is then turned to crush the spices, such as pepper, from the middle part into the lower receptacle.

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<sup>602</sup> URL:<http://museumcrush.org/eleven-tudor-treasures-recovered-from-the-wreck-of-the-mary-rose/>. Accessed: 2018-01-30. (Archived by WebCite® at <http://www.webcitation.org/6wrnMuvld>)

<sup>603</sup> Anonymous, (1660-1700)

FIGURE 109 - NUTMEG MILL, UNKNOWN, 1790-1810



The nutmeg mill in Figure 109 was also made in England, dating to 1790-1810. It is made from turning mahogany and rosewood, with an iron grinding apparatus in the middle section. It has an iron mass with a ridged surface working into a ridged socket and is fitted with a vertical shaft, onto which a handle with a wooden knob is attached and has a hinged arm.<sup>604</sup>

Nutmeg graters are the next spice object class to be evaluated. They became extremely popular from the mid-seventeenth century onwards and reached a peak during the next century. Some interesting and unique examples are shown below. As clothing at that time usually lacked pockets, these were carried in pouches or bags. Nutmegs were considered a powerful medicine against the plague; however, as time passed, they were also used to flavour food and drink, such as punch and hot mulled wine. It was quite common for people to carry around their own nutmeg graters to enable them to grate nutmeg into their food or drink to taste. There are two types, the portable ones, which were carried on a belt or, more rarely, in the pocket. The second type was kept on the table, allowing for fresh nutmeg to be grated on the dish served. Figure 110 shows a silver nutmeg grater with its case. It was made in England in the late seventeenth century.<sup>605</sup>

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<sup>604</sup> Anonymous, (1790-1810)

<sup>605</sup> Anonymous, (1927)

FIGURE 110 - NUTMEG GRATER, C SEVENTEENTH CENTURY



FIGURE 111 - NUTMEG GRATER WITH A COWRIE SHELL, 1690



Nutmeg graters available in museums come in extraordinary numbers and varieties. They became quite a craze in most well-to-do sections of society and given the nature of the expensive objects, they were passed down as heirlooms within families. Figure 111 shows an English nutmeg grater made of engraved silver around a cowrie shell, c1690.<sup>606</sup> The grater is hinged to the base with a catch. The nutmeg seed was usually placed inside the grater until needed. When taken out, the nutmeg seed was grated till the powder fell against the inside of the shell. It was then tapped out on the drink or dish, and the nutmeg seed was returned inside. The silver is engraved with the initials R.B. The silver loop at the bottom could be used to tie it to the belt for easy access.

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<sup>606</sup> Anonymous, (1690)



FIGURE 112 - WALNUT SHAPED NUTMEG GRATER, 1800-1850



Figure 112 shows a nutmeg grater dating to 1800-1850, made from silver in the form of a walnut.<sup>607</sup> Half a nutmeg was placed in the top hinged half of the grater and then, once grated, the grate was lifted by the catch, and the powdered nutmeg collected in the lower compartment was tapped out on the drink or food. The last type of spice-related objects analysed are the posset cups.

FIGURE 113 - POSSET POT, 1661



Figure 113 shows an example of a simple posset cup from 1661. The date can be seen on either side of the spout. It could also be because of the alliterative/palindromic nature of the numerical date. The bumps are made using a technique called repousse, where the clay is hammered from the inside, which could be to allow for a better grip whilst wearing gloves or to warm one's hands in the cold.<sup>608</sup> Posset is a warming drink drunk in winter and during festivals such as Christmas. The drink was usually based around spicing sherry with eggs, spices (cinnamon, mace, nutmeg, etc.), cream and sugar. It was also made with milk curdled with ale or wine and thickened with breadcrumbs and spices added as a cold remedy.<sup>609</sup>

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<sup>607</sup> Anonymous, (1800-1850)

<sup>608</sup> Anonymous, (1661)

<sup>609</sup> Paston-Williams, (2012), p37

FIGURE 114 - EARTHENWARE POSSET CUP, LAMBETH, C. 1700



Figure 114 shows an earthenware posset cup, more decorative than the previous one. It was made in Lambeth, around 1700.<sup>610</sup> Applying the material culture theory to the above objects, some aspects need to be brought out. Obviously, and across most of the objects, one can see that the objects were expensive, engraved and used precious materials. This is to reflect the fact that the spices or the contents themselves were expensive. In addition, it should also be noted that there is a survivorship bias- only expensive items will be saved for generations; simpler implements will be lost, or even gold/silver implements could also be melted down for other uses. That said, one can see how each of these spice-related objects had common meanings but different usages, while some were standalone, such as posset cups. The table spice dishes, and the nutmeg graters were clearly made to show off the wealth of the owner as well as the discerning high taste. The nutmeg graters were used as personal objects of luxury and social objects at that- they would not only use it for their own food/drink but also extend the offer to their friends and ladies out in park outings as a social outreach mechanism. More interesting the grater, the greater the chance of a social engagement and conversation, hence the popularity of unique graters.

The sheer range relating to spices and condiments shows that the usage of spices increased dramatically across all societal classes when it came to food. Spiced food became common, whether one measures this by analysing recipes or by studying objects. One interesting aspect is that the number of spice-related objects in the V&A Museum's catalogue reduced after the 1800s. It could be because these objects were simply not manufactured or fashioned that much or because the fashions changed. Additionally, it could also be due to a change in the museum's collection policy or its benefactors.

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<sup>610</sup> *ibid*, p170



### 3.6. Spices in Literature

Spices and food also appeared in literature throughout this period. Shakespearean works include some spice and food-related references in the sixteenth century. For example, Shakespeare's *Hamlet* reference to "Thrift, thrift, Horatio! The funeral baked meats / Did coldly furnish forth the marriage tables," refers to the very popular baked savoury mince pies, consumed in large quantities during feast days and wedding celebrations, as was demonstrated in the paintings and cookbook section of this chapter.<sup>611</sup> Popularity and eventual extravagance increased greatly, so that the Long Parliament forbade the celebration of Christmas as a feast day in 1644, when the Westminster Assembly spotted that Christmas would coincide with one of Parliament's regular fast days: "*A Message was brought from the Assembly, by Doctor Burges, &c. humbly to present to their Lordships Consideration, That Wednesday next, Christmas Day, being appointed for the keeping of the Fast by both Houses, they finding in the City of London some People inclined not to keep that Day so solemnly as it should be, and they fearing some Inconveniencies may ensue thereupon; therefore they humbly offer to the Wisdom of this House, whether it will not be needful, that a Declaration be drawn up, and agreed by both Houses, that it may be published the next Lordsday in the Churches within the Line of Communication, that that Day may be kept as it ought to be*".<sup>612</sup>

The Houses of Lords and Commons issued the following declaration: "*The Lords and Commons in Parliament assembled doe order and ordaine that publike notice be given that the Fast appointed to be kept on the last Wednesday in every moneth ought to be observed untill it be otherwise ordered by both Houses of Parliament: And that this day in particular is to be kept with the more solemne humiliation, because it may call to remembrance our sinnes, and the sinnes of our forefathers, who have turned this Feast, pretending the memory of Christ into an extreame forgetfulnesse of him, by giving liberty to carnall and sensuall delights*".<sup>613</sup> In June 1647, another ordinance cracking down on the celebration of feast days in general was announced: "*Forasmuch as the Feasts of the Nativity of Christ, Easter and Whitsuntide, and other festivals commonly called Holy-Dayes, have been heretofore superstitiously used and observed Be it Ordained, by the Lords and Commons in Parliament assembled, That the said Feast of the Nativity of Christ, Easter and Whitsuntide, and all other festival dayes, commonly called holy-dayes, be no longer observed as festivals or holy-dayes within this Kingdome of England and Dominion of Wales, any Law, Statute, Custome, Constitution, or Cannon to the contrary in any wise notwithstanding*".<sup>614</sup>

Shakespeare's *Love's Labour Lost* has Costard the Clown saying, "*An I had but one penny in the world, thou shouldst have it to buy Gingerbread*".<sup>615</sup> In *The Winter's Tale*, the Clown says the following about nutmegs, ginger and saffron colouring the warden pies:

"Clown:

I cannot do't without counters. Let me see; what am  
I to buy for our sheep-shearing feast? Three pound  
of sugar, five pound of currants, rice....I must have saffron to colour the warden  
pies; mace; dates?--none, that's out of my note;

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<sup>611</sup> Shakespeare, William, (1602-1603)

<sup>612</sup> Anonymous, (1644)

<sup>613</sup> Acts and Ordinances of the Interregnum, (1644)

<sup>614</sup> Acts and Ordinances of the Interregnum, (1647)

<sup>615</sup> Shakespeare, William, (1598)

nutmegs, seven; a race or two of ginger, but that I  
may beg; four pound of prunes, and as many of  
raisins o' the sun."<sup>616</sup>

Shakespeare's *Henry V* says, "He's of the colour of the nutmeg. And of the heat of the ginger... he is pure air and fire, and the dull elements of earth and water never appear in him, but only in patient stillness while his rider mounts him; he is indeed a horse, and all other jades you may call beasts."<sup>617</sup> Whilst it is nothing to do with cooking, he tries to describe somebody, using a nutmeg and ginger analogy. A similar analogy is found in Barnfield's *Affectionate Shepheard*, 1594:<sup>618</sup>

Against my birthday thou shalt be my guest:  
Weele haue greene-cheeses, and fine silly-bubs;  
And thou shalt be the chiefe of all my feast:  
And I will giue thee two fine pretie cubs,  
With two yong whelps, to make thee sport withall,  
A golden racket, and a tennis-ball,  
A guilded nutmeg, and a race of ginger,  
A silken girdle, and a drawn-worke band.

Unlike the paucity of food references in Shakespeare, Ben Johnson the poet, mentions quite a lot of food-related verses in his poem, "*To Penshurst*."<sup>619</sup> He mentions: "*Some bring a capon, some a rural cake, some nuts, some apples; some that think they make...*", and "*A waiter doth my gluttony envy, but gives me what I call and lets me eat; he knows below he shall find plenty of meat.*" Whilst this lacks a mention of spices, one can recognise the type of food that is either served on his Lordship's tables or is presented to him by his neighbours and tenants. Unlike the abundance mentioned in Ben Johnson's poem, Robert Herrick (1591-1674) talks about food in the country (with no reference to spices), which is simple and makes for a contented man in his poem "*His Content in the Country*":<sup>620</sup>

Here I live with what my board  
Can with the smallest cost afford;  
Though ne'er so mean the viands be,  
They well content my Prue and me:  
Or pea or bean, or wort or beet,  
Whatever comes, Content makes sweet.  
....We eat our own, and batten more,  
Because we feed on no man's score;  
But pity those whose flanks grow great,  
Swell'd with the lard of other's meat...

In another poem, titled *Thanksgiving*, he mentions more about food and the fact that a drink was highly spiced:

.....Who thither come and freely get  
Good words, or meat.

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<sup>616</sup> Shakespeare, William, (1623a)

<sup>617</sup> Shakespeare, William, (1623b)

<sup>618</sup> Barnfield, (1594), p18

<sup>619</sup> Tigner, (2016)

<sup>620</sup> Herrick and Pollard, (1891), p251-52

.....And giv'st me wassail-bowls to drink,  
Spic'd to the brink...<sup>621</sup>

Andrew Marvell (1621 – 1678), famous satirist and poet, authored a poem on the garden. Whilst nothing explicitly relates to spice is in this poem, there is a little pun on the word time/thyme, in the last stanza:

....How well the skillful gard'ner drew  
Of flow'rs and herbs this dial new,  
Where from above the milder sun  
Does through a fragrant zodiac run;  
And as it works, th' industrious bee  
Computes its time as well as we.  
How could such sweet and wholesome hours  
Be reckon'd but with herbs and flow'rs!...<sup>622</sup>

Extravagance in kitchens and on dining tables did not go unremarked. This follows a long tradition dating back to Greek and Roman times. In Philip Massinger's play *The City Madam* (1632), a comedy about a merchant and his brother, complicated human relationships and items relating to debt and money, it talks about expensive foods-in this case Ambergris:

Men may talk of country-christmases, and court-gluttony,  
Their thirty-pound butter'd eggs, their pies of carps' tongues,  
Their pheasants drench'd with ambergris, the carcasses  
Of three fat wethers bruis'd for gravy to  
Make sauce for a single peacock . . .<sup>623</sup>

George Wither (1588-1667), English poet, pamphleteer, and satirist, satirised the sheer range of food (including spices) available at his time:

...Beef, mutton, lamb, or such-like butcher's meat;  
If that they cannot feed of capon, swan,  
Duck, goose, or common household poultry; then  
...  
For suckets [sweets of candied fruit], march-panes, nor for marmalet,  
Fruit, florentines, sweet sugar-meats, and spices  
...  
They are both foolish and exceeding vain.  
And howsoe'er they of religion boast,  
Their 'belly is the god' they honour most.<sup>624</sup>

Samuel Pepys (1633-1703) provides a fascinating perspective on day-to-day life in the diaries he kept between 1660 and 1669, covering the English restoration period, the Dutch War, and the Great Fire of London. He refers to Hypocras (as in spiced wine), mentioned earlier in this chapter, whilst disassembling about whether or not Hypocras was a wine or not: "*We went into the buttry, and there stayed and talked, and then into the hall again: and there wine was offered, and they drunk, I only drinking some hypocras, which do not break my vowe, it being, to the best of my present*

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<sup>621</sup> Kimmey, (1970), p221-36

<sup>622</sup> Hall, (1989), p431-39

<sup>623</sup> Massinger, (1658)

<sup>624</sup> Wither, (1632), p28

judgement, only a mixed compound drink, and not any wine.”<sup>625</sup> He also talks about a drink called Lamb’s Wool, containing nutmeg: “Being come home, we to cards, till two in the morning, and drinking lamb’s-wool” [A beverage consisting of ale mixed with sugar, nutmeg, and the pulp of roasted apples]. “A cup of lamb’s-wool they dranke unto him then He notes the best universal sauce in the world: “....said it was the best universal sauce in the world, it being taught him by the Spanish Ambassador; made of some parsley and a dry toast, beat in a mortar, together with vinegar, salt, and a little pepper: he eats it with flesh, or fowl, or fish...” containing pepper.

There is evidence that he finds spiced food common, such as his comment in *Good Friday* from 1663, where he had a dinner of sugar sops (bread, sugared and spiced) and fish. He talks about the stone feast (after his bladder stone removal), where a braised neat’s (cow/ox) tongue is cooked with cinnamon, cloves, and red wine. He mentions spices in numerous entries, relating to East India trade matters, such as spices in holds of ships or purchasing them. On a separate matter, during the Great Fire, he buried valuable documents and other valuables in the garden to protect them; besides that, he also included cheese.

New words relating to food started to come into the dictionary, such as abliguration from Nathan Bailey’s 1724 *Universal Etymological English Dictionary*, defined as *prodigal spending in Belly Cheer*.<sup>626</sup> Samuel Johnson’s Dictionary, published in 1755, gives some interesting definitions relating to spices and food, indicating common usage of the words.<sup>627</sup> For example, lunch is defined as “as much food as one’s hand can hold”;<sup>628</sup> *Crapulence: drunkenness, sickness by intemperance*<sup>629</sup>; *Accelerate: to make quick*, and he gives an example quoting Arbuthnot on Aliments, “Spices quicken the pulse and accelerate the motion of the blood and dissipate the fluids; from whence leanness, pains in the stomach, loathings, and fevers.”<sup>630</sup>; To Brew: “To make liquours by mixing several ingredients” and quotes Francis Bacon, “We have drinks also brewed with several herbs, and roots, and spices.”<sup>631</sup> Maceále, which is “Ale spiced with mace,” and quotes Wiseman’s Surgery: “I prescribed him a draught of maceale, with hopes to dispose him to rest.”<sup>632</sup> Mummy: “A dead body preserved by the Egyptian art of embalming, by using myrrh and spice”-he continues stating that medicines made out of mummies are resolvent and balsamic, antiepileptic, anti-rheumatic, etc.;<sup>633</sup> Sausage: “A roll or ball made commonly of pork or veal, and sometimes of beef, minced very small, with salt and spice; sometimes it is stuffed into the guts of fowls, and sometimes only rolled in flour.”<sup>634</sup>

A book by William Ellis published in 1750 called *The Country Housewife’s Family Companion* included a poem on *apple pyes* mentioning how to spice apple pies and how it is the just reserve of cloves: “Of Apple-Pyes: A Poem, by Mr WELSTED....And Sugar pointed out the Way to Spice. ....The just Reserve of cloves, and candy’d Peel....”<sup>635</sup>

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<sup>625</sup> Pepys, Samuel, (1893)

<sup>626</sup> Bailey, (1724)

<sup>627</sup> Johnson, (1755)

<sup>628</sup> *ibid*, p1235

<sup>629</sup> *ibid*, p501

<sup>630</sup> *ibid*, p67

<sup>631</sup> *ibid*, p287

<sup>632</sup> *ibid*, p239

<sup>633</sup> *ibid*, p1338

<sup>634</sup> *ibid*, p1752

<sup>635</sup> Thirsk, (2009), p192-93

Towards the end of the early modern period, Jane Austen, in her book *Pride and Prejudice* writes: “*Miss Bingley was engrossed by Mr Darcy, her sister scarcely less so; and as for Mr Hurst, by whom Elizabeth sat, he was an indolent man who lived only to eat, drink, and play at cards; who, when he found her to prefer a plain dish to a ragout, had nothing to say to her.*” Traditional food wins over French spiced ragout.<sup>636</sup>

Although soon after this period, in *David Copperfield*, published in 1850, Charles Dickens describes the servant Peggotty and the warmth and security of his relationship with her: “*Roughened by needlework, like a pocket nutmeg grater*” is his description of the feel of the touch of her forefinger—an interesting description showing the common usage of the nutmeg grater.<sup>637</sup> Whilst some authors mention spices, the general conclusion one can draw is that seventeenth to the nineteenth-century authors did not extensively refer to food as a day-to-day occurrence in detail and spices were somewhat addressed, as far as this research shows. One potential avenue for further research is to explore more authors in greater detail to determine if other lesser-known authors referred to food and spices during this period. Despite the lack of literary mention, the fact that there were so many recipe books published, with most recipes heavily using spices, the presence of food and spices in art, and a wide range of spice objects from furniture to spice grinders and spice boxes to nutmeg graters indicates, that from a culinary perspective, spices were quite common across a broad range of the populace during the early modern period in England.

### 3.7. What happened after the Early Modern Period?

The changes to British cuisine (simpler and less spiced) due to the influence of French cuisine can be seen in the section relating to cookbooks, where the use of spices started to reduce. This phenomenon accelerated after the storming of the Bastille in Paris in 1789. One could consider that after the French Revolution, and the centuries-long antipathy towards the French, English food would be immune to French influence. Some elements, such as Hannah Glasse’s book and the *Roast Beef Poem*, clearly show anti-French sentiments. However, cookbooks started to show a unique perspective. Instead of cookbooks written by royal and aristocratic chefs, cooks and homemakers started writing books aimed at the common man and woman, who could be of straightened circumstances and therefore not open to buying luxury items. These cookbooks gradually started to reduce the number of spices mentioned in recipes. The other change in the cookbooks was the gradual disappearance of the strong patriarchal moralising tone found in earlier books, professing to educate women on how to be ideal: cookbooks now not only included recipes for food and medicines. Finally, the target audience started encompassing housekeepers and servants.<sup>638</sup> As Anne Willan points out, the other major aspect that shifted cuisine in England was the rise of Victorian culture, which encouraged self-righteousness and a lack of pomp as far as culture, and specifically cuisine, was concerned.<sup>639</sup>

Mrs Rundell’s book, published in 1807, became very popular, pointing to a classic British culinary repertoire that included dressed crab, scalloped oysters, boiled fowl with rice, bread and butter pudding, beef olives, queen of puddings, and orange marmalade—all very simple to cook and

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<sup>636</sup> Austen, (1983), p124

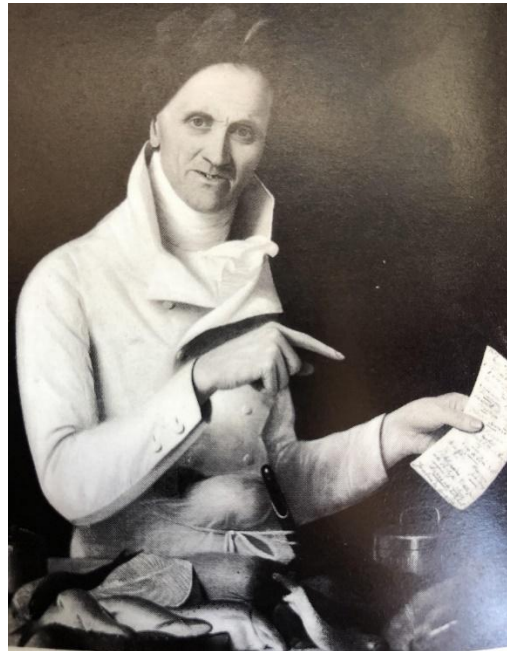
<sup>637</sup> Dickens, (1850), p150

<sup>638</sup> Lehman, (2003), p105

<sup>639</sup> Willan, Cherniavsky and Clafflin, (2012), p266

nowhere near as complicated as French cuisine (Rundell, 1807). Isabella Beeton, discussed later in this section, followed in Mrs Rundell's footsteps and created modern British cuisine, based on her book published in 1861, which was simple, non-fussy, meat-based and certainly used few spices.<sup>640</sup>

FIGURE 115 - DUKE OF BECCLEUCH'S FRENCH COOK POINTING TO FRENCH RECIPES, 1817



The Duke of Beccleuch's cook at Drumlanrig, Dumfriesshire, c. 1817, in Figure 115, is pointing to his recipe for *Gratin a la Drumlanrig* and *Croquette a la Montagu*, dishes that could be spiced with pepper, mustard and nutmeg.<sup>641</sup> After the French Revolution in 1789, there was a significant migration of French professional people, particularly French cooks, to England, causing a significant change in the culinary preferences of the aristocracy and professional classes. These chefs moved to England to take up employment with English royalty and the aristocracy. London has always been a large catchment area for the French for many reasons, such as the religious migration of Huguenot Protestants. Therefore, this post-French Revolution migration is no stranger.<sup>642</sup> French cooks not only came to London but also crossed the Atlantic to New York, spreading the cult of French cooking far and wide.<sup>643</sup>

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<sup>640</sup> Beaton, (1861)

<sup>641</sup> Paston-Williams, (2012), p234

<sup>642</sup> Kelly, (2016)

<sup>643</sup> Mennelli, (1996), p134-44

FIGURE 116 - CAREME'S KITCHEN IN ROYAL PAVILION - 2012



For example, Marie Antoine Careme, whose kitchen at the Royal Pavilion in Brighton is shown above in Figure 116, authored many cookery books in French and was tempted over the channel to work as the chef de cuisine for the Prince Regent (later George IV).<sup>644</sup> Charles Elmé Francatelli (1805–76), who worked for Carême in Paris and became chief cook and *maître d'hôtel* to Queen Victoria, cooked for clubs and the nobility and published mass-circulation cookery books, such as *The Modern Cook*, for both the middle and working classes.<sup>645</sup> This kind of royal imprimatur on English cuisine obviously means that French cuisine, lighter and less spicy, would slowly and steadily spread across the country. French cuisine suggests that meat should not be roasted or boiled but delicately poached, while chicken and fish should be wrapped in paper prior to being cooked to preserve moisture. Sauces took hours to make and were delicately flavoured, resulting in a movement away from complex heavy mediaeval spices in favour of simplified flavours augmented mainly with salt, butter, and herbs.<sup>646</sup>

Hayward reviews two articles in 1835 and 1836 in the *Quarterly Review* and notes that it is mostly French cooks who were employed in royal and aristocratic households who migrated to London after the French Revolution.<sup>647</sup> These cooks set up many hotels, taverns, and public kitchens and generally spread across London, publishing a significant number of cookbooks, which started to displace the books referenced above.<sup>648</sup> Two famous books during this period include the *Almanach des Gourmands*, a series of culinary reports edited by Alexandre Grimod de la Reynière and Jean

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<sup>644</sup> Paston-Williams, (2012), p227

<sup>645</sup> Mars, (2013), p217-40

<sup>646</sup> Freeman, (2008), p216-226

<sup>647</sup> Hayward, (1852), p1-19

<sup>648</sup> Kelly, (2016)



Anthelme Brillat-Savarin's *La Physiologie du goût*,<sup>649</sup> both were crucial in the popularisation of French cuisine in London. Most of the English aristocracy spent three or four months in London during the winter and spring of each year as part of the London Season. This heavy concentration of wealth and reputation-seeking families tried to distinguish themselves through social activities, including food. Louis-Eustache Ude (1769 -1846) was the best-known French chef in London before Alexis Soyer's reign in the kitchens of the Reform Club (1837-50). He cooked for French royalty (Napoleon's mother) and then moved to England, where he cooked for the Earl of Sefton and then George III's second son. One of the very few male cookbook authors around this time, he wrote *The French Cook* expressing various observations around how English cooking differs from French fare.<sup>650</sup> For example, he mentions that food in England was very simple, but despite devoting his art to the culinary field for years, he would not be considered above a mere domestic servant. He mentions that French cooks train their pupils to present food that is cooked to perfection, but that was not the case in England. He states that there was a national prejudice against French food.<sup>651</sup>

Whilst this dissertation has focused on the view from England, Mercier provides a snapshot of what life was like in Paris in the late 18<sup>th</sup> century during the eve of the French Revolution.<sup>652</sup> He signalled out foods, especially liqueurs, which also had copious amounts of spices.<sup>653</sup> and spices separately as formative elements of the French/Parisian mind. This is the prevailing idea of France as a place of luxury with spices and the view that the English took away to form their view.

The air of Paris, if I am not mistaken, must be a unique air. What substances flow together in such a small space! Paris can be considered like a large saucepan, in which meats, fruits, oils, wines, pepper, cinnamon, sugar, coffee, [and] the most distant productions come to mingle; and stomachs are the furnaces which decompose these ingredients. The most subtle part must be exhaled and incorporate itself in the air which one breathes. . . . How deeply the soil must be imbued with all the salts which nature had distributed to the four corners of the earth! From all these juices, assembled and concentrated in the liqueurs which flow into every household in great streams, which fill whole streets (such as the rue des Lombards), how should attenuated parts in the atmosphere not be the result, which compress the [mental] fibre more than any other part? Perhaps that is [the cause of] that lively, light sentiment which distinguishes the Parisian, that carelessness, that flowering of spirit which is particular to him.

French cooking was an indicator of wealth, refinement, and a clear distinction between the traditional country style and the modern metropolitan culture. May was perhaps the first person

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<sup>649</sup> Alexandre Grimod de la Reynière (published between 1803 and 1812), and Jean Anthelme Brillat-Savarin's *La Physiologie du goût* (1825)

<sup>650</sup> Ude, (1822), pVI

<sup>651</sup> *ibid*, pXXI

<sup>652</sup> Mercier (1791)

<sup>653</sup> Spary (2012), 16-161

to point out that this fascination with French Food was bewitching the upper classes.<sup>654</sup> What further helped the adoption of French culture was the lack of a British high-class food culture. The Duke of Wellington's (1769-1852) food habits were reputed to be so simple that he poured vinegar all over his food. A practice that horrified his French cook and hastened his departure.<sup>655</sup> His namesake dish, Beef Wellington, is actually similar to the French *filet de bœuf en croûte* (fillet of beef in pastry) that is completely unrelated to the Duke.<sup>656</sup> The modern recipe calls for spices and herbs, such as thyme, sage, bay leaves, allspice, cloves, and peppercorns.<sup>657</sup> Why French cooking took such a strong hold on English cooking has been asked before.<sup>658</sup> Mennell analyses the comparative eating habits of the French and English and posits that it was the adoption of French cooking in the higher social circles that totally transformed English cookery.<sup>659</sup> The common, albeit literate, Englishman has had complaints about French food in the 19<sup>th</sup> century anyway. Lehmann talks about some quotes from the English who talk about French food being confusing, over-sauced, only soup, rich dishes, and too much in the dressings<sup>660</sup>. Driver writes: "After Waterloo (in 1815), the climate gradually changed and British cooking of the country house kind, represented in the previous century by Eliza Smith, Hannah Glasse, and others, began to look old-fashioned. Technically, it belonged to an age that was passing away."<sup>661</sup>

The final point is that British eating habits changed, and the gentry started to frequent restaurants (as opposed to taverns, pubs, and public houses) to eat and be seen eating fine food, prepared by chefs such as Ude, Soyer, Francatelli and Escoffier, who became household names.<sup>662</sup> This does not mean that British books with a spicy perspective were not being published. For example, Eliza Acton published *Modern Cookery for Private Families* in 1845, devoting a considerable part of her book to curries, though she recommended less of them. For example, she recommended avoiding garlic. She was knowledgeable enough to figure out that it was the lack of fresh ingredients that rendered the taste of curries in Asia much finer than in England. She lists a recipe for curry powder including eight ounces of turmeric, four ounces of coriander seed, two ounces of cumin seed, two ounces of fenugreek seed, and half an ounce of cayenne pepper. She even suggests that people could go to a druggist, like Messrs Corbyn and Co. at 300 High Holborn, to purchase the ingredients.<sup>663</sup> Hence, there were books and shops selling spices. In 1811 the first Indian restaurant, *Hindustanee Coffee House* in Portman Square, opened in London, offering authentic Indian spicy

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<sup>654</sup> May (1660), preface

<sup>655</sup> Jeaffreson, (1875), p282

<sup>656</sup> URL:<http://www.telegraph.co.uk/foodanddrink/10252209/Potted-histories-Beef-Wellington.html>.

Accessed: 2018-01-30. (Archived by WebCite® at <http://www.webcitation.org/6wrN2sQiu>)

<sup>657</sup> URL:<http://www.foodsofengland.co.uk/beefwellington.htm>. Accessed: 2018-01-30. (Archived by WebCite® at <http://www.webcitation.org/6wrNL6w9z>)

<sup>658</sup> Burnett, (2004)

<sup>659</sup> Mennelli, (1996), p206 and Lehmann (2021)

<sup>660</sup> "I had been there ten Days, and in all that Time could never tell what the Name of any one Thing was that I had eaten, they were all so disguised with Ragou's, forced Meats, & c.; "The French, who never know when to stop, serve up a Capon done in this Manner with a rich Raggoo about it, but this is Confusion, and the Taste of one Thing destroys that of another"; "I was now in great Hunger and Confusion." "...a French man eats nothing but soup meagre every day in the week"; "... most of the things spoiled by being so Frenchified in dressing [...] very insipid."; "The French are commended and said to excel others in boyled meats, sawces, and made dishes [...] the English Cookes, in comparison with other Nations, are most commended for roasted meats". Lehmann (2021)

<sup>661</sup> Driver (1983)

<sup>662</sup> Ehrman, (1999), p40-64, 68-85

<sup>663</sup> Acton, (1860)

recipes. However, it soon closed. Nevertheless, EIC officials and British citizens posted in India who were pejoratively called as Nabobs brought their Indian servants back with them to England, who cooked Indian dishes when required. Generally, spices were neither used nor even liked that much by the non-EIC-exposed English, as the following excerpt from Thackeray's *Vanity Fair* in 1848 shows: *"Now we have heard how Mrs Sedley had prepared a fine curry for her son, just as he liked it, and in the course of dinner a portion of this dish was offered to Rebecca. 'What is it?' said she, turning an appealing look to Mr Joseph. 'Capital,' said he. His mouth was full of it: his face quite red with the delightful exercise of gobbling. 'Mother, it's as good as my own curries in India.' 'Oh, I must try some, if it is an Indian dish,' said Miss Rebecca. 'I am sure everything must be good that comes from there.' 'Give Miss Sharp some curry, my dear,' said Mr Sedley, laughing. Rebecca had never tasted the dish before. 'Do you find it as good as everything else from India?' said Mr Sedley. 'Oh, excellent!' said Rebecca, who was suffering tortures with the cayenne pepper. 'Try a chili with it, Miss Sharp,' said Joseph, really interested. 'A chili,' said Rebecca, gasping. 'Oh yes!' She thought a chili was something cool, as its name imported, and was served with some. 'How fresh and green they look,' she said, and put one into her mouth. It was hotter than the curry; flesh and blood could bear it no longer. She laid down her fork. 'Water, for Heaven's sake, water!' she cried. Mr Sedley burst out laughing (he was a coarse man from the Stock Exchange, where they love all sorts of practical jokes)."*<sup>664</sup> The popularity of Thackeray's work and his descriptions does indicate that his English readers were familiar with the culinary scenes so described.<sup>665</sup>

Mrs Beeton's *Book of Household Management* was published in 1861.<sup>666</sup> This became a spectacular success, one of the largest and longest runs of a cookbook to date, still under publication in various editions and versions. For many years, it remained the bestselling book apart from the Bible. Whilst she borrowed very liberally from many of the books mentioned in this chapter, she made many changes to the recipes. French recipes and words are liberally scattered around the book. A detailed analysis is not appropriate, as the book was published after the early modern period. However, it clearly indicates that by 1861, spices were on the way out; pepper and salt were combined as seasoning, and cinnamon became only for Christmas and some rare desserts. English cuisine became quite simple at that time across most social classes. The industrialisation of food, the migration of people to industrial towns, and the rise of factories all contributed to simple, cheap, and meat-based food. Hardly any, or very few, spices became the norm. Clarissa Dickson Wright opines that: *"It would be unfair to blame any one person or one book for the decline of English cookery, but Isabella Beeton and her ubiquitous book do have a lot to answer for."*<sup>667</sup> One interesting research angle that has not been explored here but could form an avenue for further research is the impact of EIC returnees. By the 1800s, the EIC was in control of a large part of South and Southeast Asia. Ever-increasing numbers of British staff went out to Asia, becoming acquainted with spiced food, and then on their return, expected similar fare in England. Whether this was influential enough to increase spice usage or whether the returnees reverted to simpler, non/less spiced British food is a question to explore.

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<sup>664</sup> Thackeray, (1848), p67-69

<sup>665</sup> Maroney (2011) and Juneja (1992)

<sup>666</sup> Beeton, (1861)

<sup>667</sup> Dickson Wright, (2011), p371

### 3.8. Conclusion

This chapter shows how pre-1500, spices were only used by the nobility and the rich upper class in food. As Mennell points out from a sociological perspective, the choice of culinary practices and ingredients was based upon the complex distribution of power and prestige. As such, expensive spices were a key ingredient in showing off the stature of the nobility and aristocracy (including the priesthood and wealthier merchant class) that did not appeal to commoners and lower orders. Mennell shows in his later chapters how cultural transformations forged changes in food choice.<sup>668</sup> Post-1500 to about 1800, spice supply increased dramatically-usage of spices spread across all levels of the populace and were commonly used daily.

The deeper review of the cookbooks showed a complex transformation in the gastronomic appetite and footprint of the English table. New ingredients were added, new formulations were done, the first curry came into the cookbooks and the return of the EIC personnel from their postings in Africa, South Asia, and Southeast Asia started to influence domestic cooking. Instead of the previous powdered spice mix usage, individual spices started getting used, which shows a greater sophistication of the palate. A greater number of spices started to be used in dishes- perhaps as a function of greater availability. The increase in literacy amongst women, the increase in the single household setups and the presence of the house help meant that food with spices began to increase in adoption. The number of published cookbooks itself showed a sharp increase, and they were also published in multiple versions as this new genre in publications caught on. Spice-related publications were not just it; common literary pursuits and channels ranging from fiction, poems and dramas all started to refer to spices as very commonplace. Spice-related objects, such as table receptacles, were common, with gadgets being carried around as a matter of course on one's person, such as nutmeg graters.

After this significant increase in spice usage, after 1800, for several reasons, such as a reaction against French cooking and wanting simpler food, spice usage dropped dramatically.<sup>669</sup> This is a key cultural shift that was captured as the nation reacted to the rise of English nationalism against the French, and it was quite often expressed in day-to-day culture, such as refusing to eat or countenance spiced, sophisticated food as a metaphor for France. The increase in religiosity and wanting simpler lives also leads to a reaction against rich food, and therefore, due to a variety of reasons, after 1800, usage of spices in food dropped significantly, and it was only till the mid/late twentieth century that the rise in Indian cuisine reintroduced the concept of spices into English food. Hence, one can see that for most of recorded English history, the use of spices was quite common in food, and the lack of spiced food was only for the period between 1800-1850 and World War II. In the next chapter, the role of spices in English medicine is explored.

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<sup>668</sup> Mennelli, (1996), p78-124

<sup>669</sup> Krondi, Michael, (2008)

## 4. Spices and Medicines/Related Areas in Early Modern England

### 4.1. Introduction

The introductory chapter's methodology section mentioned that food choice models were combined, and a specific theoretical model was determined as shown above. Chapter 2 focused on the economic history of spices, while Chapter 3 explored how spices were used in food and cuisine and were depicted in art and literary works. This chapter delves deeper into spice usage to determine how spices were used medicinally, based upon the Galenic Humoral Theory. It analyses the usage of spices in household remedies, medicinal segments of recipe books, receipt books, and in correspondence; in veterinary medicine and animal husbandry; usage by physicians and apothecaries in formulations and medicinal prescriptions; magic; religion; perfumes; clothing and ending with the use of spices as medicinal components after the 1800s. Towards the end of the early modern period, usage reduced dramatically following major medical breakthroughs (cholera in 1854, stethoscope in 1817, anaesthesia in 1840, Louis Pasteur's 1850's germ theory leading to the antiseptic procedures introduced by Joseph Lister in 1865).

### 4.2. The Galenic Theory and Application of Spices in English Medicine

Spices have been used in medicine since ancient times. Cloves were used as an antiseptic and a painkiller; coriander was used to deter fevers; cumin was used to improve digestion and treat flatulence; ginger was used medicinally to treat stomach problems and as a remedy for the plague; nutmeg was consumed to improve digestion; and saffron was used to treat infections. One of the earliest recipes with cloves was written by Anthimus, the Greek doctor to the Frankish King Theuderic I, in *Epistola de observatione ciborum* (Epistle on food diet), which is a dietary text from the sixth century including recipes.<sup>670</sup> Food as medicine has a long history dating back to the writings of Hippocrates<sup>671</sup> and Galen.<sup>672</sup> As Albala states: "Regardless of author, audience, or intention, all dietary literature in this Renaissance period depended upon a common theoretical framework based on the works of Galen. This was the system of humoral physiology, which posits that health consists of a balance of four fundamental fluids, or "humours," in the human body: blood, choler, phlegm, and bile. The predominance of any one humour determines the individual's complexion, which is continuously altered by the intake of food and condiments. A person can be described as choleric, and black pepper can be described as choler-promoting."<sup>673</sup> A common quotation attributed to Hippocrates states: "*Let thy food be thy medicine, let thy medicine be thy food*" and is symptomatic

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<sup>670</sup> Anthimus and Grant, (2007), p126

<sup>671</sup> Adams, (1891)

<sup>672</sup> Hankinson, (2008)

<sup>673</sup> Albala, (2002), p5

of this thinking, though there are doubts about the actual veracity of the quote.<sup>674</sup> Hippocrates and Galen were first mentioned in British texts from the twelfth century.<sup>675</sup> Food as medicine (both restorative/curative and preventative) was well understood and absorbed in various degrees during the early modern period.<sup>676</sup> The Anglo-Saxon Leechbook manuscript, one of the earliest English medicinal textbooks, copiously mentions spices such as pepper, saffron, cinnamon, and garlic, although nutmeg, mace and a few others are not mentioned.<sup>677</sup> The Galenic concept that there were four humours, and food/medicine helped maintain a balance, was widespread across Europe. Galen's humoral theory was not the only major area he propounded-he also worked on the cardiopulmonary system, which is also vital in this debate.<sup>678</sup> Briefly, the food that was absorbed by the gut underwent concoction, and then the liver created blood with this concoction and "natural spirit," This went to the heart and then to the lungs. Some of the blood in the heart mixed with pneuma from the "inspired air" and was thus endowed with "vital spirit," and then this was distributed throughout the body in the arteries. This is the connection between what you eat and what you breathe with the Galenic Theory. This is also one of the reasons why quite a lot of the medical staff believed in the concept of "bad air" causing diseases, and face masks with spices and other aromatic substances were used by doctors. This was a very intuitive explanation and based on this theory, food is medicine, and air to breathe in should be clean was a good pragmatic achievable and believable solution to medical issues for well over 1400 years.

Moreover, as Scully points out, cuisine was influenced by dietary principles.<sup>679</sup> Spices, specifically, came first as medicines and then were more broadly incorporated into cuisine. Albala opines those early modern physicians considered melons to be dangerous, believing they putrefied in the stomach.<sup>680</sup> Hence, physicians recommended that melons should only be eaten with some salted meat to help avoid putrefaction, which is the source of the modern dish 'melon with prosciutto.'

In England, one way of judging the popularity of this concept is to look at Pharmacopoeia- the English College of Physicians' medical bible, which was developed during this period. Pharmacopoeias are definitive reference books for pharmaceutical drug specifications and have a long history dating back to ancient Chinese times. It was around the 1500s that many European physicians' societies in Germany, France, Italy, and England started to develop comprehensive European pharmacopoeia after relying for many centuries on ancient collections of books and manuscripts authored by Celsus, Pliny, Galen, Dioscorides, Avicenna and Paracelsus. Whilst these were not the only medical frameworks used, the pharmacopoeia medicines were what most physicians were trained in and used daily. The first authoritative book was the *Dispensatorium Phamacorum Omnium*, issued in 1546 by the Senate of Nuremberg; the title pharmacopoeia was first seen in a book published in Basle in 1561.<sup>681</sup>

The *Pharmacopoeia Londinensis* (hereinafter PL),<sup>682</sup> was issued in Latin in 1618 (after a long and complex birth with work starting in 1518 when Letters Patent established the College of

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<sup>674</sup> Cardenas, (2013)

<sup>675</sup> Banham, (2011), p57-73

<sup>676</sup> Gentilcore, (2016), p1-8

<sup>677</sup> Cockayne, (1864)

<sup>678</sup> West (2014)

<sup>679</sup> Scully, (2005), p99-100

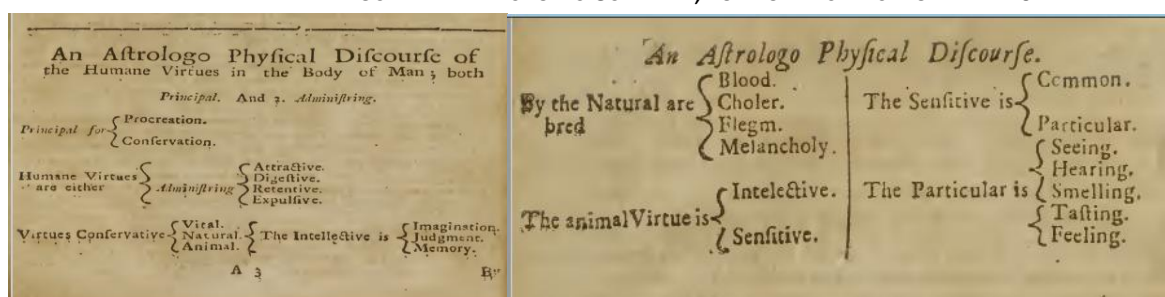
<sup>680</sup> Abala, (2002), p225

<sup>681</sup> Dunlop and Denston, (1958), p1250-52

<sup>682</sup> Anonymous, (1618)

Physicians and a team to scrutinise medicines and supervise prescriptions in the City of London) backed by a proclamation by King James I (1566-1625). This created the first officially sanctioned list of all medical drugs in Latin, written by the Royal College of Physicians established in 1518, how to use them, and their effects (including side effects). The royal proclamation also banned anybody from creating or selling medicines that did not exist in the PL (this was particularly in response to the rise of the apothecaries with whom the physicians always had a strained relationship). This book remained in print through multiple editions and was quite popular until the nineteenth century.<sup>683</sup> In 1649, Nicholas Culpeper published an English translation of the book called *The London Dispensatory*.<sup>684</sup> The publication of the Culpeper book in English immediately made medicines available to a much wider audience than the restricted set who were Latin literate. It was so successful that forgeries also appeared. The PL itself continued to be published by the College of Physicians until 1864 when the British Pharmacopoeia was issued (merging the London, Edinburgh, and Dublin pharmacopoeias).<sup>685</sup> The Culpeper edition of 1720 was published with an interesting foreword mentioning that the author had added three hundred new receipts to the book, fulminated against the forgeries, justified why he has published the book in English, and what a well-read/well-published author he is.

FIGURE 117 - NICHOLAS CULPEPER, LONDON DISPENSATORY - 1720



The LP and the Culpeper editions start with and reiterate the traditional Galenic view, with some additions, as seen in Figure 117 above. The LP will be analysed further later in this chapter; however, this clearly indicates that the fundamental medicinal framework was Galenic until late in the nineteenth century. In fact, the LP has a full section expounding on the *Galenic Method of Phyfick* where it links medicines to the Galenic theory.<sup>686</sup> The entire LP is sprinkled with references to Galen.

Culpeper divides the LP into two parts; the first contains detailed descriptions of ingredients (roots, seeds, herbs, etc.), whilst the second part names the illnesses/organs and then recommends medicines for that illness/organ. Some common spices and their uses (already identified in the cookery books for consistency) are given below:

#### Roots:

1. Garlic: is hot and dry, it binds naughty and corrupt blood, is an enemy of poisons, provokes urine & expels wind.
2. Galangal: is hot and dry, strengthens the stomach and brains, relieves faint hearts, takes away windiness of the womb, provokes lust.

<sup>683</sup> Dunlop and Denston, (1958)

<sup>684</sup> Culpeper, (1720)

<sup>685</sup> Dunlop and Denston, (1958)

<sup>686</sup> Culpeper, (1720), p305-8



3. Spikenard: is hot and dry, provokes urine, stops fluxes, windiness of the stomach, stops pestilence & stomach pains and dries up rheums that molest the head.
4. Zedoary: is hot and dry, expels wind, resist poisons, stops fluxes, stops vomiting, helps with colic, and kills worms.
5. Ginger: is hot and dry, helps digestion, warms the stomach, heats the joints, helps with gout, expels wind.<sup>687</sup>

#### **Bark:**

1. Cinnamon: is hot and dry, strengthens the stomach, helps digestion, causes sweet breath, resists poison, provokes urine, provokes speedy delivery for women, helps coughs.
2. Mace: is hot, strengthens the stomach and heart, helps concoction.<sup>688</sup>  
No herbs are reported as this research focusses on spices, hence, reported herbs such as marjoram, St. John's Wort, woad, nightshade, dandelion, dill, and fennel are not analysed, despite this section being the largest. It also contains some explicitly imported herbs such as Malabathrum from India or Suchacha from Egypt.

#### **Flowers:**

1. Saffron: removes humours in the body, fixes inflammations, creates lust, provokes urine.
2. Clove: resists pestilence, strengthens the heart, liver, and stomach, and provokes lust.<sup>689</sup>

#### **Fruits and their buds:**

1. Nutmeg: strengthens the brain, stomach, and liver, provokes urine, eases spleen pain, eases the pain in the head, joint pain.
2. Cloves: helps digestion, provokes lust, quickens the sight.
3. Pepper: expels wind, helps with colic, quickens digestion, helps with cold, heats the stomach.
4. Cubeb: hot and dry, expel wind, clean the stomach, help with spleen pains, clean head of flegm, strengthen the brain, heat the stomach, and provoke lust.<sup>690</sup>

#### **Seeds or Grains:**

1. Coriander: hot and dry, expels wind but is hurtful to the head, sends unwholesome vapours to the head so is dangerous to mad people.
2. Cardamom: heat, kills worms, cleans the veins, provokes urine.
3. Cumin: heat, bind and dry. stop the blood, expel wind, helps with bites of venomous beasts.
4. Mustard: heats, extenuates, and draws moisture from the brain, good remedy for lethargy, helps ulcers, hard swelling in the mouth, aches.<sup>691</sup>

As can be seen, most spices are considered hot and dry. Anyone suffering from a deficit of blood, choler or melancholy or an excess of phlegm is advised to take medicines containing spices. The heat drives off bad humours. Culpeper continues writing about tears, liquors, and resins; those belonging to the sea such as ambergris and coral; metals, minerals, and stones such as gold, brimstone, sapphire, ruby, and bezoar. He constantly compares his *Physik* with the

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<sup>687</sup> ibid, p3-21

<sup>688</sup> ibid, p21-4

<sup>689</sup> ibid, p58-9

<sup>690</sup> ibid, p24-58

<sup>691</sup> ibid, p63-6

recommendations of the College of Physicians, repeatedly pointing out the lacunae in the College edition and why writing in English is so much better than Latin, indicating that all ancient physicians wrote in their native language, such as Averroes in Arabic and Galen in Greek. In the next section, Culpeper starts to catalogue the various herbs and spices, that can be used to cure ills. For example:

- Heat the Head. Doronicum, Fennel, Jallap, Mechoacan, Spicknard, Celcick and Indian Peony, male and female.
- Bowels Valerian great and fmall, Zedoary, Ginger.
- The Heart. Cinnamon, Caffia Ligneae, Citron peels, Walnuts, Leinmon- peels. Mace.<sup>692</sup>

In the next section, Culpeper instructs on how spirits are made, as per the College guidance, and then adds his own thoughts. *Spiritus Caflorii*, or *Spirit of Caftorium*, is made up of lavender flowers, sage, rosemary, cinnamon, mace and cloves in wine and then distilled. It is used as an anti-poison medicine. Another example is *Peonia Compofita*, or *Compound Water of Peony*, which is for convulsions and fits, where cubebs, mace, and cinnamon are ingredients. Some other items of interest are *Cinnamon Water*, *Balm Water*, *Rofa Solis*, *Dr. Stephen's Water*, *Aqua Vita* and *Ufquebath*, all of which contain spices.<sup>693</sup> Similarly Culpeper mentions tinctures: saffron tincture and cinammon tincture; various kinds of physical wines, sometimes containing spices; vinegars mostly with flowers and herbs; syrups such as syrup of wormwood Simple, containing mustard or syrup of wormwood compound containing Indian spikenard; juices; lohoch; preserved roots and stalks; conserves and sugars; powders such as Diamfar containing cinnamon, cloves, spikenard, cardamom, and pepper; electuaries such as Antidotus Analeptica containing cloves, cinnamon, and saffron; pills such as Pitula Alphangine containing cinnamon, cloves, nutmeg, mace, and juniper berries, Filulaulx Doubus containing oil of cloves; troches such as *Tricchifei de Alfnthio* containing aniseed, spikenard, and mace; ointments such as Ungttentun Aiueum containing saffron; Plaisters such as *Emplaftrum Cephalicum* containing myrrh, cloves, juniper berries and nutmeg; Chemical Oils (no spices mentioned in this section); Oils of Seeds such as cumin; Oils of Berries such as juniper berries and finally chemical preparations such as steeping coriander seeds in vinegar (and the same for cumin seeds).<sup>694</sup>

Culpeper includes what he calls *The Forty Sixth Book of the Physitians Library Being a KEY to Galen and Hippocrates, their Method of Phyfick*. That has three sections, about the temperature and the appropriation of medicines and a third section about the properties of medicines. Each section has chapters explaining how the heat of the medicines is to be understood, where on or in the body that medication is appropriate and finally the properties of the various medicines, such as emollient, hardening, cleaning, repelling, breeding, bleeding, and purging. For example, he mentions that to purge phlegm, saffron can be used.<sup>695</sup>

Culpeper's book and the underlying LP clearly indicate the importance of the Galenic and Hippocratic frameworks in health. This led to the use of spices, as they are hot and dry, in medication for either restorative or curative purposes or directly as sauces in food as preventative medicine. Given this level of mention in the LP, it is fair to assume that spices were used widely from a medicinal perspective. This conclusion was in no way universal. There were other streams of thought, such as that of George Thompson, who published a book in 1675 that took the approach of

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<sup>692</sup> ibid, p150

<sup>693</sup> ibid, p80-94

<sup>694</sup> ibid, p95-345

<sup>695</sup> ibid, p271-305

restoring health chemically rather than through food and other ingredients based on the Galenic Humoural Theory. He distinguishes his “philosophy” from that of the “Galenists” in the title of his book, *“The Direct Method of Curing Chymically”* suggesting that Galenists are quite mistaken in their prescriptions and underlying methods.<sup>696</sup> In his book, there is hardly any mention of spices other than how alternatives to spices can be used or how these natural ingredients cannot resolve illnesses. For example: *“Is vinegar sufficient to amend the virulency of the roots of esula, Lawrel, or Mezereum, &c. Can milk tame the Cacoletie of Elaterium, the acid gas of sulphur, scamony? Or the juice of quinces the root of black hellebore? Or water wash away the realgar of lapis lazuli? I could never find any repeated Essays, that Sanders, Violets, Ginger, Mastick, Anniseed, Cinnamon, Saffron, Daucus Seed, Almonds, Penidia, Pepper, Spikenard and with several Gums, have any power to take off, to a purpose, the Deleterie Nature of Grand, boisterous Catharticks; neither do they otherwise than disguise the more gentle Poyson of Minoratives (as they call them) as Manna, Cassia, Reubarb, Sena, Agarick, Myrobal, Carthamus, Mechoa, Soldan, Turbith.”*<sup>697</sup> Whilst these were lone voices, the idea of chemical medicines reappears in the nineteenth century and is further discussed later in this chapter.

Just as people were attuned to certain humours, so they were to meats, vegetables, and spices. Fruit was cold and moist; food with a bite or which heated up the body was hot and dry, such as spices; foods that constrict the body’s passages, such as lemons and limes with sour and bitter flavours, were considered cold and dry. When conversation was about the use of spices in medicine, this would naturally include the fact that people considered food as medicine. Food (with or without spices) was primarily medicine, although pure medicines were also produced. Given the nature of English society, normal household cookery and recipe books, as mentioned in the previous chapter, contained not only cooking recipes but also medicines and, in some cases animal husbandry recipes, several of which included spices.

### 4.3. Spices in household remedies in recipe books

The previous chapter demonstrated that there was an explosion of cookbook publications from the fifteenth century onwards. In these books, the concept of food as medicine was well established.<sup>698</sup> Ingram reviewed more than a thousand letters dating to the fifteenth century (1450-1510) and clearly identified that food as medicine was a distinct theme and within this, spices and condiments were prominently featured because of their Galenic characteristic of being hot and dry. Ginger, galangal, cinnamon, rhubarb, mace, cloves, pepper, saffron, thyme, and nutmeg were quite commonly listed in the recipes for illnesses brought on by being cold and wet, such as congestion and flux. Ingram also classifies these letters and determines that three parties used home remedies: physicians, surgeons, and apothecaries, thereby confirming the methodology to focus on these actors.<sup>699</sup>

Cooks created dishes for normal food consumption with spices anyway to ensure health according to the Galenic framework. It should be noted that the bulk of healthcare during this period was based on home-based rather than physician-led medicine. Consequently, if one wants to

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<sup>696</sup> Thomson, (1675)

<sup>697</sup> *ibid*, p153

<sup>698</sup> Chen, (2009), p17-60

<sup>699</sup> Ingram, (2019), p751-772

understand spice usage, then one must review how households used spices by reviewing recipe books or receipt books published and/or written during this period.<sup>700</sup> One feature is the sheer number of physicians' case notes, receipt books, cookbooks, and recipe books that started to appear. They ranged from handwritten physicians' notebooks for private use to commercially printed publications. Due to the sheer number of manuscripts and books, only published printed books that went into several editions based on their WorldCat records were selected for review here. These manuscripts were frequently referred to by others, indicating popularity or at least that they were seminal in nature. It should be noted that many of the cookery receipt books were reviewed in the previous food and spices chapter. To round off the sampling and to ensure that there are no gaps in coverage, a few handwritten physician notebooks were also reviewed, where translations were available, as at the beginning of the early modern period in the 1500s, most were written in Latin. The use of Latin-based medical texts across Europe and the common trade in books and prescriptions meant that medical prescriptions were shared across Europe. Doctors frequently visited and were educated in the great universities, monasteries, and medical schools across Europe, encouraged by the common use of Latin. It was only after the seventeenth century (for example, the Culpeper translation of the LP) that physicians started writing in vernacular English.

In addition to food being medicine, another idea behind using spices was to correct unhealthy or inappropriate food (from the perspective of Galenic humours). Spices (hot and dry) on cold food (such as cucumber) could balance it out, making it healthy. This made food and other culinary elements humorously balanced, easily digestible, nourishing to the body, and an aid to preventative medicine.<sup>701</sup> For people of a melancholic humour, who would be cold and dry, moist and warm foods were recommended. Conversely, for phlegmatic people who were cold and moist, hot and dry foods would be consumed, such as spices.<sup>702</sup> The analytical treatment of this practice will be undertaken in two parts. First, individual manuscripts are reviewed to determine how illnesses were treated with medicines containing spices. In the second part, two medical conditions are selected, and the related medicines, with their spice content, will be traced across the period. This two-dimensional treatment will provide a richer picture on a longitudinal and transverse basis.

The first recipe book analysed in the previous chapter, *Form of Cury*, did not contain any medicinal recipes. *The castel of helth corrected and in some places augmented*, written by Thomas Elyot in 1539, has spice usage in a sizeable number of the recipes. The printing and font make the book a challenge to decipher; nevertheless, one can note significant mentions of pepper, ginger, and other spices. This book was one of the earliest popular medical manuscripts in English and had seventeen editions.<sup>703</sup> It was not well received by physicians due to it being in English and bringing medicine to the common man, something regarded as reducing the mystique of and high fees charged by the physicians.<sup>704</sup> Elyot devoted a large portion of the introduction to the complexities of humoral theory. For example, he writes that having meats, pepper, and mustard (amongst other items) will increase choler; cinnamon, cloves, and saffron are good for a cold heart, whilst nutmeg, rosemary, and galingale are soothing for a cold head. This is exactly like Galenic theory, the only

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<sup>700</sup> There are many medical, physician and related receipt books extant during this period. For example, the collection in the Wellcome Library <https://wellcomelibrary.org/collections/browse/collections/digrecipe/> contains ~ 450 receipt books.

<sup>701</sup> Gentilcore, (2016), p19-20

<sup>702</sup> Twyne, Thomas, (1576)

<sup>703</sup> Healey, (2014), p238

<sup>704</sup> Nutton, V, (2008), Linacre, Thomas (c. 1460–1524), Lehmborg, S, (2008), Elyot, Sir Thomas, (c. 1490–1546)

difference being that other physicians prescribed and discussed this in Latin, whilst Elyot was able to explain it in vernacular English.<sup>705</sup> A similar treatment (with humoral theory, use of spices, etc.) is given in a similar book by William Vaughan (1600), titled *Naturall and Artificial directions for health*, published in 1600, which ran to seven editions spanning thirty-three years.<sup>706</sup> He asks questions and answers them, for example: “*What is the vse of Oisters? Oisters rosted on the imbers, and then ta-ken with oyle, Pepper, and the iuice of Oren-ges, prouoke appetite and lecherie. They must not bee eaten in those monethes, which in pronouncing wante the letter R.*”<sup>707</sup> Interestingly enough, his general recommendations stood the test of time (even if they were based on Galenic concepts that are no longer appropriate), such as the recommendations for clean air and water, a balanced diet, olive oil, low animal fat, avoidance of red wine, eating more fibre, exercising, and avoiding tobacco use, which every doctor in the National Health Service in modern-day England would recommend to their patients.<sup>708</sup> *The treasurie of commodious conceits, & hidden secrets and may be called, the huswiues closet, of healthfull prouision* written by John Partridge in 1573, has a few medical recipes where spices are mentioned (book pages are not numbered), such as cinnamon, aniseed, cumin seeds, galingale, spikenard, etc., in a powder for colic and stomach ache; ginger and aniseed to make the belly soluble; cinnamon in a receipt to restore strength; cinnamon and ginger to make Ipocras (hippocras); cloves in Damask water, etc. He mentions humours in many of the medical recipes, targeting “*hot humours*” or “*evil humours*”.<sup>709</sup>

The next books analysed are *The Good Hufvwives Jewell* as well as *The Widdowes Treasure*, both authored by Thomas Dawson in 1585 and 1595, respectively.<sup>710</sup> While the medical receipts were not written in a separate section as in later books, several recipes with spices are clearly marked for medicinal use and intermingled with normal recipes. For example, a syrup of quince is made using ginger, cinnamon, and pepper to settle the stomach. A purgative recipe mixes aniseed and ginger in a pint of white wine.<sup>711</sup> In the latter book, Dawson focuses on medicinal recipes (approximately 150) and talks about *Doctor Steeuen’s Water*, which is made of wine infused with ingredients such as ginger, galingale, cinnamon, cloves, mace, etc. This water is described as comforting the spirits, preserving man’s youth, helping with the common cold, avoiding pregnancy, killing belly worms, helping with toothache, comforting the stomach, curing bladder stones, as a canker cure, and improving breath.<sup>712</sup> Similarly, rosemary water is made of flowers boiled with spices such as cloves and mace. Dawson does not mention what rosemary water is supposed to be used for.<sup>713</sup> The Water of Life recipe involves a long and complicated preparation including nutmeg, cloves and saffron. This Water of Life seems to be one of the universal remedies, curing problems of the spleen, jaundice, people who are melancholy or phlegmatic (Galenic concepts are clearly indicated), and all problems of the brain, liver, stomach, providing digestive help, quickening memory, and a host of other ailments.<sup>714</sup> The recipe for a caudle to comfort the stomach includes

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<sup>705</sup> Elyot, (1539), p11, 23

<sup>706</sup> Charlton, (2005), p656-64

<sup>707</sup> Vaughan, (1600), p22

<sup>708</sup> URL:<https://www.gosh.nhs.uk/medical-information/general-health-advice>. Accessed: 2018-12-09. (Archived by WebCite® at <http://www.webcitation.org/74X3foSac>)

<sup>709</sup> Partridge, John, (1573)

<sup>710</sup> Dawson, (1585, 1595)

<sup>711</sup> Dawson, (1595), p53

<sup>712</sup> *ibid* p40

<sup>713</sup> *ibid*, p41

<sup>714</sup> *ibid*, p46

mace.<sup>715</sup> Gervase Markham's book, *The English Huswife, Containing the Inward and Outward Virtues Which Ought to Be in a Complete Woman*, was published in 1615.<sup>716</sup> Its first chapter focuses on medicines for fevers and illnesses. Markham mentions how to ensure humours (demonstrating that the Galenic humoral theory was well-established by this time) are dissolved and dispersed into the outward body parts by rubbing the head.<sup>717</sup>

Markham's medicinal prescriptions assume that homemakers had access to herbs, roots, and spices. Various kinds of oils and waters that either form the basis for a medicine or are an ingredient, such as Dragon Water or Rose Oil, are frequently mentioned. It is unknown if these include spices, whether they are made by the homemaker or are purchased from the grocer. Some examples of medicines are given below. His prescription to protect against pestilence is to mix herbs such as sage and elder leaves in white wine, adding ginger and treacle before drinking twice, morning and evening. He recommends avoiding hot spices.<sup>718</sup> For an "*infection of the heart*," he recommends a cordial of herbs and roots boiled in running water or white wine, adding sugar and saffron to the resulting liquid.<sup>719</sup> For headaches, he recommends rosewater with vinegar and other liquids (including *women's milke*) to be absorbed by dried cakes, with nutmeg powder sprinkled on top. Curiously, the liquid-soaked cake is not meant to be eaten but to be divided in two and tied to each temple. The sufferer is then supposed to lie down, and Markham promises that the pain will heal soon.<sup>720</sup> Another medicine to help the heart involves galingale powder.<sup>721</sup> As a sleeping potion, he recommends dried and powdered saffron, dried lettuce leaves, and white poppy seeds mixed with woman's milk (breast milk), boiled to a thick paste, then applied to the temples, resulting in sleep for four hours.<sup>722</sup> An old cough has a complicated medicinal recommendation, including finely beaten pepper and coriander seeds.<sup>723</sup> *To stay the flux of the Rubme* (this illness is not clear, and an initial review did not provide any pointers to its nature), various powdered herbs and spices such as nutmeg are to be put into a linen bag, heated, and laid on the nape.<sup>724</sup> For watery eyes, juice of daffodils and other herbs are mixed with saffron with white wine, boiled, strained, and then this liquid, once cooled, is used to wash the eyes.<sup>725</sup> A stitch can be cured by grating cinnamon into ale and drinking it.<sup>726</sup> A prescription for wind colic contains nutmeg, whilst another prescription for wind colic includes pepper and ginger.<sup>727</sup> Oil of mace is an ingredient for a recipe addressing a weakness in the back and back pain.<sup>728</sup> These are some examples of spice usage in the first chapter of Markham's book, indicating that these were based on the Humoral Theory. Spices were represented in ~15 percent of the remedies.

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<sup>715</sup> *ibid*, p23

<sup>716</sup> Markham, (1615)

<sup>717</sup> *ibid*, p12

<sup>718</sup> *ibid*, p9

<sup>719</sup> *ibid*, p12

<sup>720</sup> *ibid*, p26

<sup>721</sup> *ibid*, p30

<sup>722</sup> *ibid*, p12

<sup>723</sup> *ibid*, p14

<sup>724</sup> *ibid*, p15

<sup>725</sup> *ibid*, p17

<sup>726</sup> *ibid*, p29

<sup>727</sup> *ibid*, p30-31

<sup>728</sup> *ibid*, p38

The next recipe book to be analysed in this area is *The Accomplisht Cook* by Robert May from 1660.<sup>729</sup> May has a section XXIII captioned, “*Shewing the best way of making Diet for the Sick,*” where he provides remedies for sickness. May, unlike Markham, whose remedies are in high double figures, only lists eighteen remedies. To fix consumption, he recommends: “*Cut him in six pieces, and wash him clean; then take prunes, currants, dates, raisins, sugar, three or four leaves of gold, cinnamon, ginger, nutmeg, and some maidenhair, cut very small; put all these foresaid things into a flagon, with a pint of muscadine, and boil them in a great brass pot of half a bushel; stop the mouth of the flagon with a piece of paste, and let it boil the space of twelve hours; being well stewed, strain the liquor, and give it to the party to drink cold, two or three spoonfuls in the morning fasting, and it shall help him. **This is an approved medicine.***” His last line, printed in bold italic font, means it is of importance and is approved by some authority, the College of Physicians, although he does not specify that. May seems to have expensive recommendations, as his ingredients are quite costly. The next remedy for consumption (it is not clear what kind of consumption, as usually consumption relates only to lungs) includes mace, a leaf of gold, ambergris, dates, and raisins. Another remedy for an unspecified consumption includes mace, cloves, raisins, and herbs. A remedy for consumption of the lungs involves making a jelly including nutmeg, cinnamon, cloves, sugar, liquorice, mace, prunes, and ginger. A remedy called China Broth has mace, pepper, and other herbs and spices. Another way of making China broth also includes mace.<sup>730</sup>

Sarah Fell of Swarthmore Hall maintained a household account book, dated around 1714, articulating how she purchased spices, for cooking as well as for remedies. She explicitly purchased cinnamon waters (249), juniper berries (274), and saffron (27) for medicinal purposes.<sup>731</sup> *The Receipt Book of Lady Anne Blencowe* (1656-1718) provides some fascinating insights into how medicines were made and used in an affluent household. Her receipts (recipes) are a combination of her own recipes and those received from various other people collected in a separate section. For example, she mentions “*Lady Gage’s Receipt for a Dropsy*” containing mustard seed, which she obtained from Lady Gage. Another similar dropsy recipe includes juniper berries and other herbs/roots. Her own recipe to make *Surffet Water* contains flowers, nutmeg, mace, cinnamon, and ginger. A recipe to strengthen the eyes was whimsical: “*Let another that is young chow annyseeds & then breath upon ye partys eyes. For the Green Sickness,*” adding cinnamon and sugar. A drink to improve the spleen contains zedoary (related to turmeric), indicating that Indian spices were well established in the supply chain into these stately homes. A recipe called red ball for smallpox or fever contained saffron, red coral, pearls, and gold leaf. It was expensive to make and thus would be used sparingly. A recipe for *Aqua Mirabilis* has mint, cubebs, galingale, nutmeg, and fennel seeds. The Blessed pills (a laxative for constipation) contain saffron and mace. The recipe for “*Mrs Sherlock’s recept for a pain in ye head*” includes sugar, juniper berries, cinnamon, and nutmeg infused in wine. Some receipts were eye-catching, such as one for “*Plurecy Water for grips and fitts in children,*” which contains aniseed in horse dung water and a cough/consumption medicine, which included snails and earthworms. Overall, spices are used in around half of the medical recipes included in her receipt book.<sup>732</sup>

One question to be asked is whether households adopted these medicinal recipes. Stobart comprehensively surveys household papers and medicinal recipe collections to explore the extent to

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<sup>729</sup> May, (1660)

<sup>730</sup> *ibid*, p451-456

<sup>731</sup> Fell, 1920

<sup>732</sup> Blencowe et al, (2004), p97-145



which these recipes were applied in real life around the end of the seventeenth century, a time falling in the middle of the early modern period. She selected households from south-west England, noting that there is a clear shift away from purely household medicine to a combination of household and commercial medicines purchased from shops and apothecaries over this period. She gives receipts using cubebs, galingale, nutmeg, garlic, ginger, and cloves to make *Aqua Mirabilis*. Examples of household accounts indicated purchases of allspice, cloves, ginger, mace, nutmeg, black & white pepper, cinnamon, aniseed, mustard seeds, and garlic. Obviously, these purchases were not just for medicines but also for daily cooking.<sup>733</sup>

In 1670, Hannah Woolley wrote *The Accomplish'd lady's delight in preserving, physick, beautifying, and cookery*. Besides cookery recipes, she provides 111 medicinal receipts and 72 beauty treatments. In the medicinal receipts, she notes a high usage of spices. Some examples are using cinnamon to make cinnamon water; using pepper to induce childbirth; making eye drops using pepper and herbs; using nutmeg, saffron, mace, spikenard, cinnamon, and ginger to make angelica water and nutmeg and aniseed to make balm water.<sup>734</sup>

A book of receipts by an anonymous author dating to 1675-1725 has a small collection of culinary and medical receipts in different handwriting, indicating that this is a household receipt book collected over several generations in one family. An example of a receipt is *Elixer Salutis*, which includes spices such as coriander.<sup>735</sup> Another interesting handwritten book dating to 1710 is a collection of medical receipts. It has several authors and might be an apothecary's receipt book, though a receipt for a love potion to make the husband love his wife indicates that this could also be a household medicine book. Easier to read than the previous apothecary book, it has some interesting recipes. A printed recipe to cook for a husband (inserted by the printer) recommends garnishing with the spice of pleasantries. An index details the enclosed recipes, and most of them are in common with what was found in published and printed medical books, with a significant number of recipes containing spices such as garlic, mustard, saffron, cinnamon, mace, and nutmeg.<sup>736</sup>

Elizabeth Freke's inventory papers, written between 1710 and 1712, show that spices were a common occurrence in medicines. With more than two hundred culinary recipes and three hundred medical recipes, ailments such as surfeit, feelings of fullness, and a weakened stomach (angelica, baume, saffron, nutmeg); "weakness" of the liver (saffron, ivy, nutmeg, rosemary); coughs and general weakness of the lungs (saffron, poppy); face blemishes (scurvy grass, lemon water); fevers (angelica, gillyflower); weakness of the heart (baume, angelica, gillyflower) and of the head and the brain (rosemary, nutmeg) were common occurrences. Interestingly, she has notes from the *Pharmacopoeia Londinensi*, which is analysed later in this chapter.<sup>737</sup> It should be noted that most women's receipt books were meant for home use. Consequently, one can see that the choice of illnesses noted is the family illnesses of their spouses and children. Moreover, there is a rich corpus of medicines relating to women's illnesses and conditions such as menstruation and pregnancy avoidance/abortion (which contain spices).<sup>738</sup>

The next recipe book to be analysed is *The Compleat Housewife, or, Accomplish'd Gentlewoman's Companion*, a cookery book written by Eliza Smith and first published in London in

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<sup>733</sup> Stobart, (2008)

<sup>734</sup> Woolley, (1670)

<sup>735</sup> Anonymous, (1675-c.1725)

<sup>736</sup> Anonymous, (1675)

<sup>737</sup> Leong, (2008), p145-68

<sup>738</sup> Evans, (2012), p2-19

1727.<sup>739</sup> It has many recipes for cookery, pastry, sweets, preserves, pickling, wines, and cordials. It also includes about two hundred family medicinal recipes. Smith points out that these medicines (which are frequently new/have never been published) could be used by families, gentlewomen, as well as poor people. In Part IX, she mentions recipes for cordial waters, which were used for medicinal purposes or as bases for medicines. These include *gripe water*, *vertigo water*, *Dr. Burgess's antidote against plague*, and *rose water*. Recipes using spices include *hapnatick water* for the gravel, which contains nutmeg; *palfey water* which contains cinnamon, nutmeg, cardamom, mace, cubeb, and saffron, to be used to cure swoons, weakness of the heart and spirit, restore speech, treat joint pains, improve memory, and many other maladies. *Aqua Mirabilis* includes cubeb, cardamom, galingale, cloves, mace, nutmeg, cinnamon, and coriander, besides other flowers and herbs. Most of the cordials mentioned have some spices included in them, usually in a powdered form, or the liquid is steeped in the spices.<sup>740</sup> Part X lists medicines and salves in the first and second chapters, containing broths for the sick. Smith provides multiple different remedies for the same illness. For example, for agues, she gives nine different remedies; for the bite of a mad dog, she provides five. The first remedy for an ague includes a mixture of gunpowder, black soap, tobacco, and brandy powder to be applied to the patient's wrist, whilst another includes tobacco and cloves mixed with soap to create a paste, which is again applied to the inside of the patient's wrist. A cure for the bite of a mad dog includes garlic and bacon, while yet another remedy includes pepper. The latter remedy necessitates bathing the patient in a cold bath or cold spring/river every morning for a month. Nutmeg also appears in a non-spice manner, for example, as a remedy against spitting blood. It says that the dose, (supposed to be given morning and evening) in the form of an electuary, should be the size of a nutmeg. Smith uses spices liberally, with them appearing in about half of her remedies. The spices appearing in her book are the usual pepper, cubebs, galingale, cinnamon, cardamom, cloves, and mace.<sup>741</sup>

The next book to be analysed, *The Art of Cookery Made Plain and Easy*, by Hannah Glasse, was published in 1747. In Chapter VI, she gives recipes for soups and broths. As was noted earlier, broths were used as remedies for illnesses, but as this was analysed in the previous chapter, these dual-use recipes are not discussed here. Nevertheless, Chapter X has a collection of recipes entitled *Directions for the SICK*, where Glasse gives recipes for how to boil various kinds of birds and poultry, to make gruel, feed water, and bread water. For mutton and for a veal broth, she includes a large blade of mace; a chicken broth remedy includes grated nutmeg, boiled partridge contains mace, artificial asses' milk includes ginger, etc. In Chapter XXIII, she provides five medical recipes, a sparse number compared with the books reviewed above. She provides two remedies for a mad dog bite (containing pepper), which are almost identical to Eliza Smith's remedy above: one for plague (many herbs but no spices), one to avoid bugs (including pepper), and one remedy to clear beds of bugs (no spices). It is curious that Glasse provides few remedies in what an exceedingly popular book was. One potential explanation could be that, by this time, there were many medicinal books available, with medical knowledge becoming highly specialised and widespread and medicines becoming more available across the land; hence cookbooks no longer felt the need to provide remedies.<sup>742</sup>

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<sup>739</sup> Smith, (1727)

<sup>740</sup> *ibid*, p281-306

<sup>741</sup> *ibid*, p308-71

<sup>742</sup> Glasse, (1747), p92-99, 178-82, 252-54

*The Country Housewife's Family Companion* was published in 1750 by William Ellis. It was aimed at a rural audience and set in a rural framework.<sup>743</sup> This book has a section on diseases and medicines. Ellis does not claim these recipes as his own but reports they were given to or observed by him. One finds recipes and remedies without personal recommendations of their efficacy or efficiency, and the expectation is that spices will be sparsely used, given the rural setting. Ellis reports on remedies such as curing hoarseness with figs boiled in milk and garlic; similarly, a cough medicine has garlic, and another cough medicine has ingredients that are inexpensive, consisting of mostly herbs. An asthma remedy reported by Ellis involves swallowing young frogs; another adds pepper to ale; yet another asthma recipe mixes figs, cloves, garlic, and prunes with rum; and finally, a recipe for a sore throat mixes honey and pepper. The range of diseases is more specific compared to the previous books, with separate sections for jaundice, gout, dropsy, rheumatism, St. Anthony's fire, itching, leprosy, scald-head, wounds, bleeding, pregnancy, sprains and bruises. Additionally, it covers consumption and inflammation of the lungs, ague, colic, and receipts for various diseases. Almost three hundred remedies are given, some of which contain spices. A recipe for gout has the spirit of saffron, turpentine, and hartshorn mixed and inhaled, while another recipe suggests pouring spirit of lavender into the shoes. Besides gout, saffron is used in remedies for coughs and fevers, antiscorbutic (scorbutic related to scurvy) cordial elixir, for smallpox and jaundice.

Pepper is used to cure itches, ague, wind colic, toothache, and sore throat. Cinnamon is an ingredient in remedies for ague, in antiscorbutic Cordial Elixir, a remedy for scorbutic humours, and for a sharp scorbutic humour in the skin (the Galenic humour angle is still relevant). Cardamom is not used much, with only one remedy for the purge containing cardamom seeds. Cloves are also only used in an *antiscorbutick electuary*. It is interesting to note how vastly different these remedies are for the same disease, indicating that there was no structure around pharmacopoeia or medicinal theory yet, even if the Galenic insights were adopted. Finally, for a rural document, it is surprising that Ellis does not report any veterinary or animal husbandry remedies. The last books analysed in the previous chapter are the *Complete System of Cookery* by William Verrall;<sup>744</sup> the *Experienced English Housekeeper* by Elizabeth Raffald;<sup>745</sup> and the *Complete English Cook* by Ann Peckham<sup>746</sup>. They did not contain any medicinal recipes. Given this trail of cookbooks, which stopped listing medicines in their contents from the second half of the eighteenth century, it is a reasonable assumption that the publication of dedicated pharmacopoeia and the increasing specialisation of medicine meant that common cookery books started to focus only on food recipes, excluding remedies. In the next section, the use of spices in animal husbandry is reviewed.

## 4.4. Use of spices in veterinary medicine

As expected, in veterinary medicine, spice usage is much lower, as spices are expensive, even for affluent families. In all the books reviewed in the previous section, which included veterinary medicines, all relied on herbal preparations in water, ale, or wine. Dawson, in his 1585 book, *The Good Hufvifes Jewell*, mentions several recipes and medicines for looking after animals that were common in rural households. One prescription for cattle (oxen) who ate poisonous flowers

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<sup>743</sup> Ellis, (1750)

<sup>744</sup> Verall, (1759)

<sup>745</sup> Raffald, (1769)

<sup>746</sup> Peckham (1767)

or berries is to dose the ox, with treacle in two pints of wine or ale with some saffron added.<sup>747</sup> Saffron was grown locally in England, hence relatively inexpensive. An oil to stretch shrunken sinews is made using bay leaves amongst other items.<sup>748</sup> An interesting line in the Animal Husbandry section recommends using saffron in two pints of wine or ale with treacle that also colours cheese yellow.<sup>749</sup>

*A Booke of receipts both for Phisicke and Chirurgery* by anonymous authors, published in 1641, gives feedstock and medical recipes for horses, although in a handwriting very difficult to decipher. The receipts mostly contain herbs, such as sage, although aniseed and mustard are mentioned a few times.<sup>750</sup> The Receipt Book of Lady Anne Blencowe (1656-1718) gives a receipt for a horse under a great cold or surfit, where aniseed is mixed with ale and honey, stirred, and given to the horse. There is another receipt from Mr Blencowe in Lady Blencowe's book for a horse's cold, but it does not contain any spices. A receipt for cattle bitten by a mad dog includes mint, primrose roots, and English box.<sup>751</sup> Given the lack of receipts for animal illness using spices across the entire period, it can be assumed that spice usage for animal husbandry medicines is minimal. Given the clear links to the use of pharmacopoeia, the next section reviews how specialists like apothecaries and physicians used spices in their medicines.

## 4.5. Use of spices by physicians

The number of printed medical books during the early modern period exploded in availability from the previous era's handwritten Latin-based manuscripts.<sup>752</sup> While the previous books' circulation was limited due to language constraints and lack of supply (because they were laboriously copied out), these printed medical books in English meant a much larger population had access to their recipes. A selection of such physician books (circa 400 from the Wellcome Library London)<sup>753</sup> was analysed. They were selected according to factors such as multiple editions and reprints (based on WorldCat entries), used over at least 2-3 decades, and references in other books. A significant driver of the publication of these English-language books (as evidenced by the publication of LP by Culpeper) was a reaction against the Royal College of Physicians' medical elitism and medical books written in Latin. For example, during the period 1649-1699, 282 books on medical-chemical and astrological themes alone were registered by the Stationers Company in London.<sup>754</sup> Gentilcore reports that health guides amounted to 10 percent of all the medical books printed, whilst curative medicine books such as recipe collections reached almost 25 percent.<sup>755</sup>

Nevertheless, most of these books were based on the works in Latin published by the Physicians College. It is also apparent that given the Latin-based foundation, the knowledge was not purely English but also relied on medical books published across the continent where Latin was the main *lingua franca* in medicine and surgery. Rueff wrote a book on midwifery in 1554; its English translation was published in 1637. In this book, he explains how to use hot foods to improve sexual

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<sup>747</sup> Dawson, (1585), p46

<sup>748</sup> *ibid*, p51

<sup>749</sup> *ibid*, p42-45

<sup>750</sup> Anonymous, (1641)

<sup>751</sup> Blencowe et al, (2004)

<sup>752</sup> Taavitsainen et al. (2011)

<sup>753</sup> <https://wellcomelibrary.org/> accessed 24 April 2022

<sup>754</sup> McCart, (1996), p225-76

<sup>755</sup> Gentilcore, (2016), p26

potency by heating up the body. He repeatedly recommends galingale, rocket, pepper, ginger, and cinnamon to improve any infirmity of the seeds (both male sperm and female eggs).<sup>756</sup> *The methode of phisicke* by Barrough was published in 1590 and liberally mentions spices. For example, pepper occurs sixty times in this book. An aphrodisiac recipe includes pepper, aniseed, and mustard seed.<sup>757</sup> John Hester wrote a book in 1580 (which went to 12 editions between 1580 and 1600) titled *The First Part of the Key of Philosophie: "Wherein is contained most excellent secretes of phisicke and philosophie, divided into two bookes. In the first is shewed the true and perfect order to distill, or draw forth the oiles, of all maner of gummes, spices, seedes, roots and herbs, with their perfect taste, smell and vertues: In the second is shewed the true and perfect order to prepare, calcine, sublime, and dissolue al maner of mineralles, and how ye shall drawe forth their oiles and saltes, which are most wonderfull in their operations, for the health of mans bodie."* The title of the book itself indicates the use of spices. Describing himself as a practitioner in the art of distillation, his book shows the trend of developing medicines using chemical means, by rigorous (by the standards of his time) experimentation and more standardised medicines, as opposed to the Galenic framework. Despite this growing gap between the Galenic framework and the chemical framework, spices were used by both.<sup>758</sup>

Walter Baley, a physician, wrote a short discourse in 1588 on the three kinds of peppers commonly used to preserve health. Whilst he debunks the ancient and mediaeval idea that pepper was produced by burning pepper trees, he believes pepper is good for health.<sup>759</sup> William Vaughan (1577-1641), despite being a lawyer, wrote a book called *Naturall and artificial directions for health derived from the best philosophers, as well moderne, as auncient* in 1600. In Chapter 1, he clearly elucidates that man's health is based upon his relationship with humours (Galenic), and to keep healthy or cure sickness, the right food must be consumed. Chapters 7 and 8 talk about how to use spices and herbs such as cinnamon, cloves, pepper, ginger, saffron, and garlic. For example, he writes that cloves taken moderately strengthen the body, stave off vomiting and fluxes and improve stinking breath and ginger will sharpen eyesight and provoke slothful husbands.<sup>760</sup>

The physician astrologers Simon Forman and Richard Napier produced one of the largest surviving sets of medical records in history, comprising 80,000 consultations for 50,000 patients in 64 volumes from 1596 to 1634. The dataset is extraordinarily rich, and one can track the use of various ingredients for different diseases they treated across their entire professional lives. A review of these casebooks by keyword search indicates that spices were used in accordance with the extant medical practices and various medical receipts. Interestingly, many medicines were made or dispensed by the physicians themselves, rather than asking the patients to buy them from an apothecary.<sup>761</sup> A beautifully laid-out notebook by a physician dating to 1650 contains medical recipes, including those for the plague. The handwritten and legible book has an exhaustive table of contents with space left for additional entries. Some additions were made with a different hand, such as the entry on the bottom right-hand side, and there are several pages towards the end with recipes (some cooking, some medical) in different hands, indicating that this notebook passed

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<sup>756</sup> Rueff, (1637), p55-61

<sup>757</sup> Barrough, (1590), p143

<sup>758</sup> Hester, (1580)

<sup>759</sup> Baley, (1588)

<sup>760</sup> Vaughan, (1600), p25-28

<sup>761</sup> Foreman et al. (2018)

through several owners.<sup>762</sup> *A Booke of Receipts both for Phisicke and Chirurgery* by anonymous authors from 1641, gives recipes (both cookery and medical) for humans and animal husbandry, although in an illegible handwriting. Spices are mentioned in many of the recipes, such as cinnamon and galingale. Felix Platter, Abdiah Cole, and Nicholas Culpeper published a book in 1664, mentioning foods such as the brains, stones, and flesh of crawfish, crabs, lobsters, oysters, and cuttlefish, as well as milk, eggs, chestnuts, beans, barley, and almonds to correct a want of copulation and note that these foods by themselves will not stimulate sexual desire as the real source comes from the sauces that contained pepper.<sup>763</sup>

Many physician diaries and receipt books contained both cookery and medical receipts. For example, the manuscript titled *A booke of receipts phisicall and chirurgicall* dating to the late seventeenth century is most probably compiled by a physician given the type of receipts found in the book (especially as he is very particular about weights and preparation of recipes). A lack of paragraphs and the run-on sentences make it a difficult book to decipher, although the physician mentions common spices such as pepper, saffron, coriander, aniseed, and mustard. (Anonymous, late seventeenth century). Samuel Pepys, in his entry on July 1<sup>st</sup>, 1664, gave a patient's perspective after receiving prescriptions from his doctor, which is quoted in full to record the prescription and the patient's reaction. As can be seen, the Galenic concept is still present (the heat reference). Many spices are recommended in this recipe: "*July 1st... comes Dr. Burnett, who assures me that I have an ulcer either in the kidneys or bladder,... He did write me down some direction what to do for it... Take of ye Rootes of Marsh-Mallows...of each one Handfull,... of Nutmegg, of each halfe an ounce...boyle it to ye consistence of a Syrrup and reserve it for use. Dissolve one spoonefull of this Syrrup in every draught of Ale or beere you drink...If you are bound or have a fit of ye Stone eate an ounce of Cassia new drawne...*"<sup>764</sup>. Pepys's compatriot, Samuel Hartlib (1600-1662), wrote voluminously on a variety of subjects, also commenting on spice usage in medicine. For example: "*Shall wee argue with the common husbandman that there is no medicine able to sure his distemper, because there is not vertue enough in a Possett made with pepper to doe it.*"<sup>765</sup> Cinnamon, saffron, and ginger are sufficiently mentioned, showing that spice usage in medicine was very well known, discussed, and practiced at least in circles frequented by Pepys and Hartli, in both England and Continental Europe.

The close relationship between food and medicine meant physicians were expected to be good dieticians and cooks as well. '*A good coke is halfe a physycyon*', wrote Andrew Boorde in 1542, while Thomas Cogan affirmed in 1584 that '*the learned physitian...is or ought to be a perfect cooke in many points*'.<sup>766</sup> This can also be seen in Theophilus Lobbe's book, where he sends letters to his correspondents giving prescriptions and diet and cooking advice, all intermingled. The physicians haven't only prescribed hot and dry spices for cold and moist food as a balance (for example recommending hot and dry mustard sauce on cold and moist pork making the pork easier to digest), but they also recommended the strict order in which food should be eaten. Light food was to be eaten first (hence the rise of soups as the first course), but raw fruit was not supposed to be eaten at the end as it would float on top of the rest of the food, putrefy, and send bad humours to the brain.<sup>767</sup> Even as late as 1804, physician Alexander Hunter, in his interesting cookery and medicine

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<sup>762</sup> Anonymous, (1650)

<sup>763</sup> Platter, Cole and Culpeper, (1664)

<sup>764</sup> Pepys, (1893)

<sup>765</sup> Greengrass, Leslie and Hannon, (2013)

<sup>766</sup> Boorde, (1542), p98

<sup>767</sup> Gentilcore, (2016), p21

book (which went through several reprints till 1820), said that a good physician must be competent with cookery, although this perspective became rarer over time and with new medical discoveries emerging.<sup>768</sup>

The background of the LP has already been discussed in the first section. This was the seminal book for medicines between the sixteenth and nineteenth centuries and was the source and driving force for the usage of medicines and preparations thereof. The four humours mentioned in the book are *blood, choler, flegm and melancholy*. Blood is hot and moist, choler is hot and dry, phlegm is cold and moist, while melancholy is cold and dry. There are also other descriptors, such as with reference to meat (choler is made of meat more than perfectly concocted), where it lies (phlegm lies in the lungs, while melancholy is in the spleen), and which planet it is influenced by (blood is governed by Jupiter and phlegm is covered by Venus or the Moon).<sup>769</sup> Most of the prescriptions are linked to this hot, cold, dry, and moist classification, which is the focus; the other descriptors are therefore ignored.

Hunter also describes complexions and behaviours that help the physician diagnose the balance of humours and therefore prescribe the right medicine to balance hot with a cold medicine, dry with a wet formulation, etc. He gives the weights and measures used in medicine: twenty grains make a scruple, three scruples make a dram, eight drams make an ounce, and twelve ounces make a pound. Given the expensive price of spices, the recommended weights are of importance.

1665 saw one of the seminal medical events with the Great Plague of London breaking out. Charles II asked the College of Physicians for advice, and the College published the *'Advice set down by the College of Physicians (at the King's Command) containing certain necessary directions for the cure of the plague and preventing infection.'*<sup>770</sup> The physicians provided remedies, which included saffron, cinnamon, myrrh, cloves, mace, and mastic. Thorpe reviewed the correspondence of John Allin, an irregular physician, while treating the sick during this period. While the age-old Galenic perspective was present when prescribing anti-plague remedies, John Allin also started to innovate and prescribe chemical remedies (sometimes containing spices) besides dietary advice. These commercially obtained ingredients and medicines slowly started to add to the corpus of available medicine.<sup>771</sup>

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<sup>768</sup> Hunter, (1804)

<sup>769</sup> Culpeper, (1720), pA4

<sup>770</sup> Anonymous, (1665)

<sup>771</sup> Thorpe, (2018)



FIGURE 118 - PLAGUE DOCTOR BEAK, SEVENTEENTH CENTURY



The famous image of a plague doctor wearing a beaked plague mask is seen in Figure 118.<sup>772</sup> The beak of the mask contained aromatic items, which would include flowers and spices. The idea was that bad smells and the humours of the plague would be overpowered by their good aroma.<sup>773</sup> When Pope Clement VI died from the plague in 1352, he was embalmed with an injection containing aloe, myrrh, acacia, ramic (which is nutmeg, gallia muscata), alipte, the skin of pomegranates, cypress nuts, nutmeg, sandalwood, aloeswood, salt, cumin, and alum dissolved in vinegar and rose. Spices and other aromatic items were used to improve the smell of the dead, postmortem, indicating that the person had reached heaven/paradise.<sup>774</sup> The use of spices in religious rituals is further discussed later in the chapter. Two plague recipes are given in an anonymous 1650s *English medical notebook*. The first recipe, Dr. Burgis's medicine for the plague, has sage, long pepper, ginger, and nutmeg along with other ingredients, whilst another plague recipe has sage, long pepper, ginger, and nutmeg.<sup>775</sup> This late seventeenth-century/early eighteenth-century notebook of medical and culinary recipes, compiled by Caleb Lowdham and Jane Lowdham (his wife or daughter who contributed the cooking recipes), has a plague recipe that does not mention spices at all. The colic recipe talks about aqua Cinnamon.<sup>776</sup> Curiously, most of the recipes and case notes are struck

<sup>772</sup> Anonymous, (1656)

<sup>773</sup> Khan, (2004), p24

<sup>774</sup> Rollo-Koster, (2018)

<sup>775</sup> Anonymous, (1650)

<sup>776</sup> Lowdham and Lowdham, (late 17<sup>th</sup>-early 18<sup>th</sup> Century)

through with vertical lines. Given the untidy nature of the notebook, it could be a draft, transcribed later into a proper notebook. Also, comparatively fewer recipes contained spices, given the rather rural setting (recipes are frequently tagged with village names), perhaps due to the unavailability of spices prompting the lack of their usage.

Lémery, a French doctor, published a book in 1706, translated to English as *A Treatise of Foods in General*, in which he tried to merge the chemical concept with the Galenic concept, though still considering food as the primary source of medicines, rather than separate chemicals. For him, spices are still hot and dry and would help somebody suffering a lack of hot and dry humours. Hence, if you want to eat cucumbers, best do it in the summer, seasoned with hot and dry foodstuffs like onions, salt and pepper.<sup>777</sup>

Theophilus Lobb authored a book called *The Good Samaritan or Useful Family Physician*, published in 1764. He was a member of the Royal College of Physicians in London; therefore, his prescriptions are a good counterpoint to evaluate how the LP and Culpeper's views on pharmacopoeia and spices were considered. He is comfortable with the Galenic Theory and approvingly recommends remedies against too much blood or phlegm, validating the assumption that Galen's views were prevalent quite late into the eighteenth century. Many of his proposed remedies contain spices. For example, two separate medicines for a child's colic contain cinnamon water; a fever medicine includes nutmeg water. For putrid fevers, he recommends a tea with snakeroot, nutmeg, and saffron sweetened with sugar. Alternatively, he recommends mountain wine and water with some nutmeg and sugar. Another remedy for skin spots occurring with putrid fevers includes nutmeg water. A gruesome section talks about how to restore life to people who have drowned or suffocated. He adopts a recipe from a Spanish author named *Feijoo*, suggesting that a medicine (which has saffron and oil of cinnamon) can be used to revive people who were hanged, yet are 'slightly' alive, by removing the coagulated blood. A recipe for rheumatism includes garlic. A cure for hiccups includes oil of cinnamon dropped on a lump of sugar and then allowed to dissolve in the mouth.<sup>778</sup> Garlic appears in a remedy for the bite of a mad dog, in Lady York's choice recipe to preserve from smallpox and plague, and for violent pains in the ears. A remedy for a hollow aching tooth includes oil of cloves. Lord Chesterfield's excellent powder to help delivery includes cumin seeds, saffron, and grains of paradise, reduced to a fine powder to be given in claret or mace ale. Ginger appears in a jalap electuary for purging the stomach and acts like a laxative. A recipe for ague has nutmeg and cloves. It is a short book of 44 pages, containing about a hundred recipes and guidance. A quantitative analysis was considered, but unlike cooking recipes, it is difficult to separate the remedies from precautions and general observations. The book is also missing an index, unlike Culpeper's book which is well classified by various indices by type of medicine, material, and symptoms, amongst others.<sup>779</sup>

One medical treatise dating to the seventeenth century prescribes a cure for foolishness as: "*Take of the Plaster of Floris unguent so called, two ounces, of Tachamahac of Carranae, of the Balsom of Tolu, each three drams; of the powder of Amber, Myrrh, each two drams; of Cloves, Nutmeg, Mace, each one dram; being all liquefied or melted together, let them be made into a mass, of which make a Plaster, spread it on leather, and the head being shaved, put it to it.*"<sup>780</sup> As can be seen in the LP, the medical treatises of this time included many aphrodisiac recipes (for lust) that

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<sup>777</sup> Lemery, (1704)

<sup>778</sup> Lobb, (1764), p4, 8, 9, 14, 19

<sup>779</sup> Ibid, p27, 36, 38, 41-43

<sup>780</sup> Cranefield, (1961), p291-316

had spices. Marsh reports the case of a young woman asking for advice to become pregnant, receiving the most common advice to treat her husband with all sorts of spices, oysters, eggs, coxcombs, sweetbreads and caviar and to go to the coffee house and drink chocolate.<sup>781</sup> It should be noted that recipes prescribed by physicians and doctors were normally not just additive in nature, meaning physicians would not only prescribe additional recipes but would also frequently recommend that patients undertake dietary restrictions (reduce something they eat or drink frequently or balance their diet) to regain their health. This is borne out in a study by Weston of about 2,500 physicians' letters during the period 1655–1789, albeit in France.<sup>782</sup>

Some physicians discouraged spices in their entirety, along with other 'bad' foods. For example, an influential book by Dr. George Cheyne, published in 1724, entitled *An Essay of Health and Long Life*, argued against the consumption of strong flavours and spices and against complex recipes, advocating simple preparations such as boiling and roasting. The book hardly mentions any spices. However, he includes a recipe for rhubarb with grated nutmeg, weighing two scruples, to be used to purge one's body if unable to fast regularly or eat modestly.<sup>783</sup> This kind of simple cuisine starts to be adopted by many physicians in England.<sup>784</sup> These doctors protested the gluttony at courtly banquets, mixing various courses, and proposed simple cooking with herbs, at best, to stay true to the Galenic tradition. Albala provides a good overview of convalescent cookery in the early modern era with examples from English, French, and Italian cookery books and manuscripts.<sup>785</sup> Broadly, the writers, physicians, and cooks avoided spices in bland food and broths, although one recipe suggests a bit of grated nutmeg for flavour. The next physician's book reviewed is by Dr. William Buchan of the Royal College of Physicians. First published in 1769, it went into multiple reprints and versions. This review is based on the 1795 version, which is a bookend for the period covered by this research. Buchan recommended a holistic perspective towards health, with well-balanced meals, a prudent and moderate diet, and exercise. He also explained how the poor could also form good dietary habits and for people not to assume that just because food was stodgy, it was only appropriate for the poor.<sup>786</sup>

Nevertheless, one can still notice the old Galenic thinking coming through. The bite of a mad dog can be addressed by a medicine containing black pepper (along with a cold-water bath in a tub or stream); on the other hand, if one has an indigestible substance forced down, one should only have a mild diet - avoiding heating and irritating substances like wine and pepper. Despite his recommendation, recipes for purging, flatulence, and digestion include Jamaican and Black pepper. Ginger is used in recipes for ague, colic, heartburn, epilepsy, flatulence, and venereal diseases. Other spices mentioned in various recipes include nutmeg, cinnamon, mustard, and mace.<sup>787</sup> A French physician, Jacques-Jean Bruhier, re-edited Lemere's book in 1755 and argued that seasonings like spice were unhealthy. They harm healthy people, damage the small blood vessels, and weigh down the body rather than nourish it.<sup>788</sup> Burnby, in her study of English apothecaries, gives a distinct perspective. She points out that apothecaries were originally called 'Spicers' or 'Spicer' and were

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<sup>781</sup> Marsh, (1682), p77

<sup>782</sup> Weston, (2013), p179

<sup>783</sup> Cheyne, (1724), p37

<sup>784</sup> Albala, (2002), p257-58

<sup>785</sup> Albala, (2011), p323-328

<sup>786</sup> Buchan, (1795)

<sup>787</sup> *ibid*, p154, 300, 418, 432, 444, 480, 493, 668, 674, 690, 695

<sup>788</sup> Gentilcore, (2016), p71

responsible for dealing with items of high value such as spices, sugars, and medicines, compared to the Pepperers, who were wholesalers and shippers. Hence the ‘Spicer Apothecary’ was the retail end of this trade. She mentions how a Shrewsbury apothecary’s cash book of 1706 and 1707 shows that there was a good sale of spices, either by themselves or as part of medicinal compounds that the apothecary constructed. A Coventry apothecary’s cash book shows how he supplied spices and medicines to various people, like the local gentry. Burnby explains in detail how the physicians looked down on the apothecaries, not considering them gentlemen and only mechanically minded. She writes that this snobbishness arose from the idea that trade was bad and standing behind the counter was not considered to be intellectually or socially high. However, their earnings were high, and in fact, the apothecaries could command a premium to take on apprentices. She reviews the histories of several families with whom apothecaries were involved directly or indirectly and finds that there is no broad evidence of approbation being heaped on them.<sup>789</sup>

*Aristotle’s Masterpiece*, first published in 1684, went through 130 editions by 1800 and was still being printed in the twentieth century.<sup>790</sup> A manual about sex and pregnancy, it is not authored by the ancient Greek philosopher and scientist, Aristotle, but by an anonymous early modern author. The name of Aristotle was used to provide some verisimilitude to the manuscript. The manuscript includes many references to spices, and not just in terms of recipes. For example, the author mentions that due to eating sharp and salty things along with spices, virgins start desiring carnal embraces. He recommends pregnant women be careful in dietary matters, only having moderately dry foods, avoiding meats that are too hot or too cold, and moist foods such as salads, and to avoid spices. He warns that if this recommendation is not followed, the baby could be premature or born without nails (which predicts a short life). If the embryo’s status is unclear, then a recipe for white wine with cinnamon is recommended as cinnamon refreshes and strengthens the baby. He recommends certain spices to increase the seed (potency), such as cinnamon, cardamom, galangal, long pepper, cloves, ginger, and saffron in wine. Overall, the manuscript lists many recipes containing spices, for barrenness, to strengthen a man’s yard, distemper of the womb, womb excretions, overflowing of the monthly courses, straightness of the womb during delivery, and ointments for the navel. It also suggests diets for pregnancy months that contain spices, such as nutmeg and aniseed in the seventh and ginger in the eighth month.<sup>791</sup>

*A Treatise on the Theory and Practice of Midwifery* was an exceedingly popular book of a collection of patients’ accounts (in three volumes) by William Smellie published from 1752 to 1764. Smellie authored these books to shift obstetrics from a discipline practiced by midwives with limited medical training to one practiced in a medical context by physicians. The book uses many spices, such as how women should drink warm wine infused with spices when suffering from dropsy; different concentrations of spices should be used depending upon the patient and pregnancy month; how women after delivery should eat little solid food but drink lots of liquids, including water gruel boiled with mace and cinnamon; how nurses should know various potions (which include nutmeg); and how a child needs to be kept warm by being rubbed with spirits, garlic, onion, or mustard.<sup>792</sup> A damaged physician’s diary entitled *A Collection of Medical Prescriptions Accompanied by Practical Remarks and Examples*, written in 1790, has many recipes that include spices, although the humoral angle is missing. It is written in a very formal and systematic way,

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<sup>789</sup> Burnby, (1979), p13, 261-3, 407-8

<sup>790</sup> Hobby (ed.), (2017)

<sup>791</sup> Aristotle, (1684), p21, 38, 99, 131, 133

<sup>792</sup> Smellie, (1752), p160, 229, 391, 390, 444

mentioning ingredients and their weights in an indented manner, clearly indicating this as the work of a physician accustomed to writing systematically and with scientific precision. Two examples of recipes for liver issues contain spices such as aniseed and saffron. Such recipes occur throughout this manuscript.<sup>793</sup> An article/advertisement in the *Oxford Journal* dated January 15<sup>th</sup>, 1774, talks about Dr. Ward's Medicines (the scan is unclear of the doctor's antecedent). There is a full column of his remedies. In one of them, a paste for fistula and piles is suggested to be taken twice or thrice a day, of the size of a nutmeg, indicating that nutmeg was so common and popular that its size and shape were used as a common medical measure.<sup>794</sup> On a completely different note, an interesting use of spices emerged as part of the scientific progress. Substances such as indigo, saffron, and madder were used to stain parts of materials and then studied under primitive microscopes of the early seventeenth century (such as by Leeuwenhoek). The staining of varied materials allowed the doctors and scientists to distinguish and delineate a connection between cell variations and to distinguish a standard structure of plant cells from that of the animals. Saffron was obviously a strong staining agent, given its use in dyeing over the centuries.<sup>795</sup>

## 4.6. Apothecaries

The physicians themselves did not normally physically produce the medicines. They wrote prescriptions, and then the patient or his family would either make the medicine themselves from common household ingredients or, if complex and difficult to procure, purchase the medicine from an apothecary. The Italian word for apothecary is *speciali* from *spezie* or spices, as they were the ones selling spices. John Parkinson (1567–1650) was the apothecary to James I, royal botanist to Charles I, a founding member of the Society of Apothecaries, and a great herbalist and botanist. He made a huge contribution to medicine and was also involved in the drafting of the LP. He wrote two magisterial books, *Paradisi in Sole Paradisus Terrestris* (*Park-in-Sun's Terrestrial Paradise*, (1629), which generally describes the proper cultivation of plants, and *Theatrum Botanicum* (*The Botanical Theatre or Theatre of Plants*, (1640), the most complete and beautifully presented English treatise on plants of its time, which includes medicinal recipes. There is mention of spices, although focusing on spices and herbs that are English in provenance. The first book gives more culinary recipes, whilst the second book gives more importance to medical recipes, and all the common spices, such as pepper and ginger, are referenced.<sup>796</sup> Harvey warned his readers that apothecaries were ignorant, and their prices were significantly inflated. He provides a list of medical ingredients that can be purchased from druggists (as opposed to apothecaries) and mentions some of the costs, such as for galangal, pepper, aniseed, and coriander seeds. For example: “*Pepper white, the pound 1 s. 8 d.; Pepper long, the pound 9 d.; Pepper of Jamaica, the pound 2 s. 4 d.; Cardamom, the pound 4 s., Coriander-seeds, the pound 4 d.*”<sup>797</sup> Harvey, as is common with other authors of this period, is quite comfortable in prescribing spices in his remedies. An example is for *Aqua Mirabilis*, which includes a dram of cloves, galangal, cubebs, mace, cardamom, nutmeg, and ginger in wine.<sup>798</sup> These medicines

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<sup>793</sup> Anonymous, (1790)

<sup>794</sup> Anonymous, (1775)

<sup>795</sup> Titford, (2009), p9-19

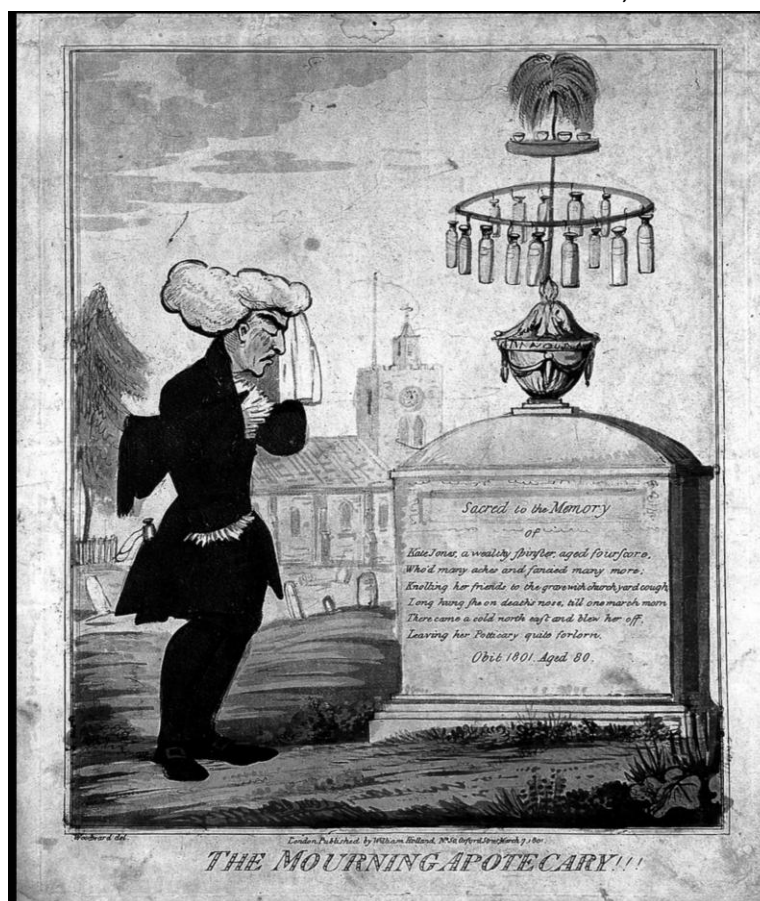
<sup>796</sup> Parkinson, J. (1629 & 1640)

<sup>797</sup> Harvey, (1678) p121

<sup>798</sup> *ibid*, p19

could also be purchased from sellers promoting their wares in advertisements, which were on billboards or in newspapers, which started to be published widely from 1695 onwards.<sup>799</sup>

FIGURE 119 - WEEPING APOTHECARY, 1801



Harvey is anti-apothecary, which is evident throughout the book, starting from the title. This was quite a common feeling. An aquatint from 1801, in Figure 119, shows a weeping apothecary at the grave of his sponsor. The tombstone inscription says, “*Sacred to the memory of Kate Jones, a wealthy spinster, aged fourscore, who'd many aches and fancied many more: knolling her friends to the grave with church-yard cough, long hung she on death's nose, till one March morn there came a cold northeast and blew her off, leaving her potticary quite forlorn. Obit 1801. Aged 80.*”<sup>800</sup> The medicine bottles on top of the tombstone are a reference to apothecaries vending bad, expensive and/or adulterated medicine to everyone.

Whilst there are few extant objects relating to spices belonging to physicians, thankfully, one can access some spice-related objects used by apothecaries during the early modern period. These were sourced from the Royal Pharmaceutical Society Museum and the V&A Museum in London. There are many apothecary jars in existence; therefore, only a sample of these jars, with a spice link, is shown below. Applying the material culture framework-the key reason for showing these artefacts is to show how spice (and other ingredients) jars were used as more than just storage containers by apothecaries. Spices, other ingredients, and medicines were expensive. Medicinal knowledge was arcane. Hence, these jars were used for multiple purposes besides the pure mechanics of storage.

<sup>799</sup> Heyd, (2021), p138

<sup>800</sup> Woodward, (1801)

These jars showed off apothecaries' superior knowledge (compared to chemists and druggists who did not undergo formal training and were not members of the Society of Apothecaries). They formed part of the advertisements of their wares, as the decorations often had quasi-mystical or ancient Grecian motifs to support well-established medical lore encapsulated in the medicines. The jars sometimes displayed the owner's name or had the City of London arms indicating the owner to be a freeman of the City of London. The blazon of the Apothecaries Society was also found on some of the jars to indicate professional standards. The year of manufacture was often emblazoned on jars, more to indicate longevity rather than quality control.<sup>801</sup>

FIGURE 120 - VULPIN JAR, 1684



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<sup>801</sup> Dreu, (1978), p129-139

FIGURE 121 - FOX LUNG JAR - 1520



Figure 120 shows a delftware drug jar, dating to 1684,<sup>802</sup> containing Vulpin or Oil of Fox.<sup>803</sup> The jar shown in Figure 121 has a similar title, LOCH DE PVL' VVLPIS (fox lung loch), or a powder made from fox lungs.<sup>804</sup> Fox meat and organs were used because they were very hot. Oil of a fox is made by boiling a freshly killed fox fat in white wine and spring water, combining the mix with other ingredients such as thyme, dill, and cinnamon water. This was then prescribed for palsy.<sup>805</sup>

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<sup>802</sup> Hudson, (2006), p50

<sup>803</sup> Brugis, (1651), p51-52

<sup>804</sup> Anonymous, (1520)

<sup>805</sup> Chomel, (1725), p678



FIGURE 122 - ELECTUARY OF CASSIA, 1507



Figure 122 shows a jar, dating to 1507, containing electuary of cassia (Chinese Cinnamon).<sup>806</sup> As the previous recipes show, cinnamon was used frequently in early modern medicine.

FIGURE 123 - MUSTARD JARS – 1556, 1560-70



The two jars shown in Figure 123 contained mustard, used as a plaster, poultice, or as an ingredient in other medicines. The jar on the left was made in 1556,<sup>807</sup> whilst the one on the right was made in 1560-70.<sup>808</sup>

<sup>806</sup> Anonymous, (1515)

<sup>807</sup> Anonymous, (1556)

<sup>808</sup> Anonymous, (1560-1570)

FIGURE 124 - GINGER JAR, 1630 -70; SAFFRON JAR, 1510-1530



In Figure 124 on the left is a ginger jar dating to 1630-1670 with the familiar constricted neck and much taller than normal jars. The word *R Zimzib* indicates that this is for ginger.<sup>809</sup> On the right is a drug bottle for *Bafarano* (saffron) made in 1510-1530.<sup>810</sup>

A few common elements jump out of these jar pictures based on the above and other examples in the museums. Usually, these jars had a waist and a lip and were covered with parchment, paper, or cloth and then tied at the waist with twine/string. Secondly, whilst most of the jars have the drug name displayed on them, there are many without such legends. In these cases, the apothecary would write the drug name on a piece of paper and glue it on the jar or hang a wooden name tablet around the lip. As noted, the language used is Latin, the common *lingua franca* of European medicine. This is because the physicians, following the *pharmacopoeia* written in Latin, prescribed medicines in Latin. The second advantage is that it denotes the apothecary to be a learned person-knowing Latin. The engravings and paintings of apothecary shops also show a rather interesting pattern-most of the jars were similar and would make an arresting, symmetric display.

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<sup>809</sup> Anonymous, (1556a)

<sup>810</sup> Anonymous, (1556b)



FIGURE 125 - JOST AMMAN, THE BOOK OF TRADES – THE APOTHECARY, 1568,



FIGURE 126 - WOLF HELMHARDT VON HOHBERG, WOMEN AT AN APOTHECARY, 1695



Quelle: Deutsche Fotothek

Additionally, the brilliant colours of these jars are of note. This was a form of advertising. Colourful jars brighten up the normally dark shops and form a pleasant backdrop for patients who would feel welcomed into the shop. Both engravings in Figures 125 and 126 date from the

sixteenth<sup>811</sup> and seventeenth<sup>812</sup> centuries, respectively, showing apothecary shops. Whilst these are engravings, one can imagine how these rows of brightly coloured jars and other containers would have looked to customers. As Wallis writes, the arrangement of these jars, animal skeletons, and stuffed animals hanging from the ceiling, the implements, and the instruments all helped to mediate between medicine and people. Wallis analyses a range of evidence to show how apothecary shops were laid out, especially in London. For example, he mentions the sheer number of containers in these shops. In 1637, the London apothecary John Arnold's shop had 117 glasses, 295 pots and jars, and 183 boxes and barrels.<sup>813</sup>

FIGURE 127 - DOCTOR OR APOTHECARY CHEST FIFTEENTH CENTURY



A chest, dating to the fifteenth century, is seen in Figure 127. It has been variously described as belonging to a doctor (because the doctor's skull cap is carved into the wood or because of the nature of the carving). It was for show by an apothecary and could have contained expensive ingredients such as spices, as it had a built-in lock.<sup>814</sup>

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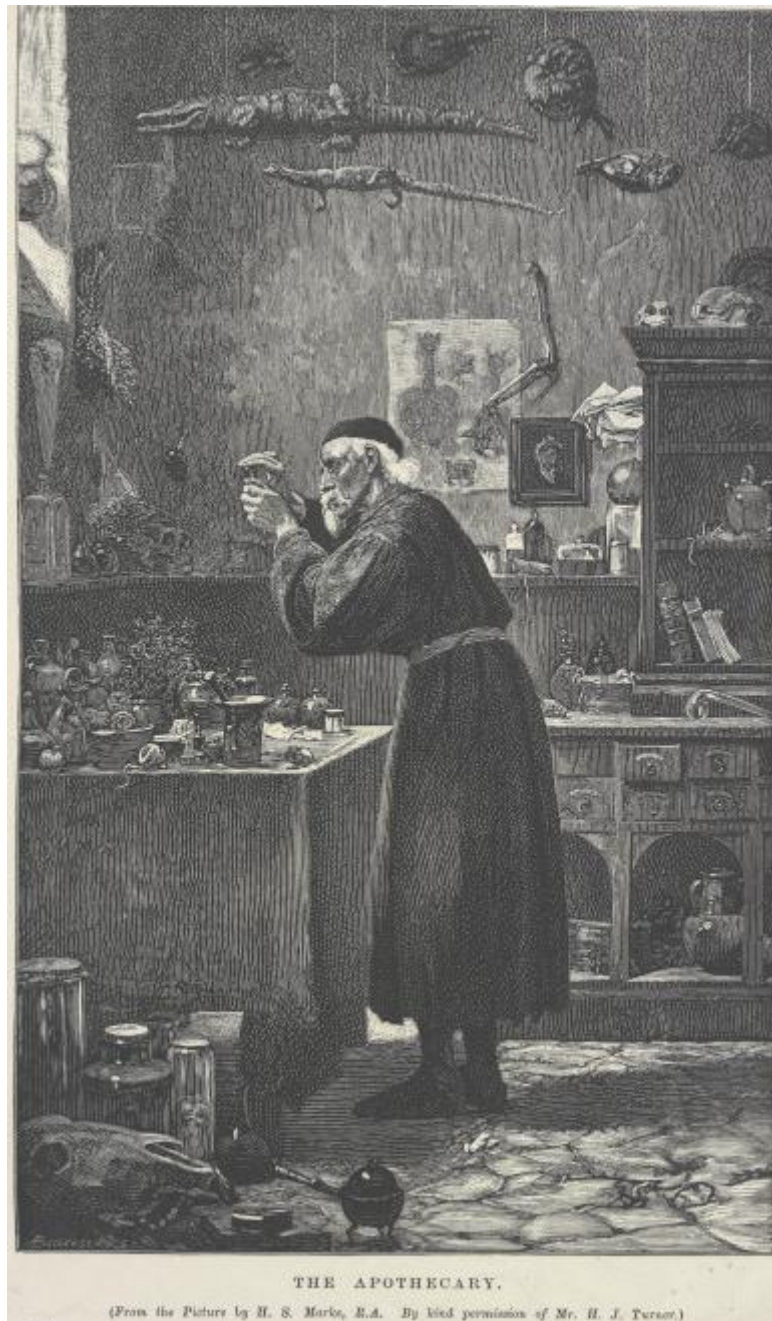
<sup>811</sup> Amman and Sachs, (1973)

<sup>812</sup> von Hohberg, Wolf Helmhardt, (1695)

<sup>813</sup> Wallis, (2008), p26-53

<sup>814</sup> Anonymous, (1400-1450)

FIGURE 128 - MARKS, HENRY STACY, MID-NINETEENTH CENTURY, THE APOTHECARY



An engraving of an apothecary, dating to the mid-nineteenth century, in Figure 128, shows a representation of how an apothecary's laboratory would have looked. It is different from the shops shown in the previous engravings. One can notice sample bottles, various instruments, stuffed and/or dried animals and skulls/bones.<sup>815</sup>

<sup>815</sup> Marks, HS (artist), and A Bellenger (engraver), (mid 19thc).



FIGURE 129 - MORTAR, 1550



One of the most common elements found in an apothecary shop and laboratory is a mortar and pestle, used to grind materials and make the medicines. Most materials were supplied whole (not least to ensure that the powder was not contaminated) and then ground on the premises. The mortar shown in Figure 129 dates to 1550. Made from bronze, it has reliefs showing pride, hope, a man and woman falling in love, an infant with his leg on a skull and hourglass, plants, and lizards. Each of these represented various elements that are allegorical to the apothecary's wares. Whether it be children's health, love potions, alchemy (relating to the lizards/salamanders' ability to survive fire), or plants for potions, they are all represented. The metal itself is supposed to have alchemical powers, and by grinding ingredients and mixing them in the mortar, the metal is expected to transfer some special powers to the medicine.<sup>816</sup> Although the use of metal mortars declined after the eighteenth century as commercial grinding machines became more common and the knowledge that metal mortars were dangerous, due to metal poisoning aspects.

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<sup>816</sup> Anonymous, (1550)

FIGURE 130 - A LADY, WITH HER MAID, LITHOGRAPH, 1850



Love potions were a large part of an apothecary's business, as the lithograph in Figure 130, published in 1850, shows.<sup>817</sup> It depicts a lady with her maid consulting with an apothecary in his workroom for a love potion. One can see different mortars and pestles, his receipt book, various books, bottles, and distillation apparatus in the workroom. He is holding something small and red with a pair of tongs in his right hand, which he is extending to the lady and gesturing with his left hand.

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<sup>817</sup> Anonymous, (1850)

FIGURE 131 - MORTARS AT V&A MUSEUM, 1540



The mortar on the left, in Figure 131, with a pestle (which is comparatively rare as pestles were easily lost) was made in 1540 out of a copper alloy. It shows architectural mouldings, but the arrows of St. Sebastian are an indication that the arrows will kill diseases with the medicines (arrows) made in this mortar. The mortar has two handles to stabilise it or to hold it if boiling ingredients were included.<sup>818</sup> The 1540 mortar on the right also has two handles. This could have been cast in a bell mould. The gothic script on the bottom says, '*qui cito Sanari a morbo conaris amaro pucipys obsta deteriora cave.*' "*You who are trying to be cured of bitter illness oppose it from the first and avoid trouble.*" The flowering plants indicate that these plants and flowers were used in medicines.<sup>819</sup>

In terms of material culture-the entire arrangement of the apothecary shop, the expensive spices, the rows of brightly coloured jars with arcane Latin script, the equipment, the preparation of the medicines with the scales, mortar and pestles and packaging the medicines into packages and then the instructions-all combined to provide a sense of confidence, comfort, awe, and distance to the patients who were looking for remedies. But the march of science essentially undercut the main essence of apothecary remedies, and thus these spice-related objects lost their relevance.

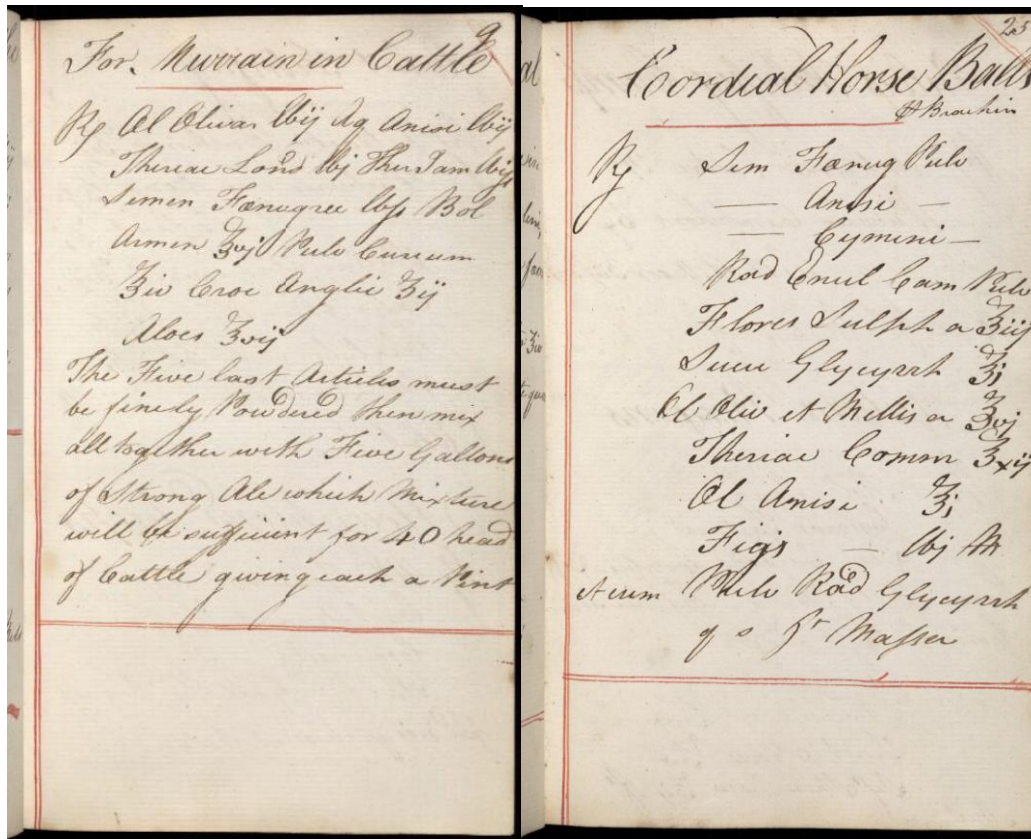
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<sup>818</sup> Anonymous, (1540a)

<sup>819</sup> Anonymous, (1540b)



FIGURE 132 - APOTHECARY RECIPE BOOK 1800



Apothecaries also maintained their own recipe books. The extract from a recipe book penned by an anonymous apothecary, shown in Figure 132, dates to 1800. It mentions Theriac (see next section), an ancient anti-poison medicine containing saffron, cinnamon, ginger, and other ingredients. This is addressed to fixing health problems for cattle who might have been poisoned due to bites or ingesting poisonous plants/animal life. Another example of *Cordial Horse Balls* contains aniseed. It is to be noted that these recipes are more precise; listing the ingredients with their weights and directions (many of them contain guidance like boiling, and straining).<sup>820</sup> Nevertheless, as opposed to the *Pharmacopoeia*, these apothecary recipes are not associated with the relevant illness they are expected to remediate. This is presumably because they are simply following instructions from physicians who direct what medicine is to be used, when, and for what malady. There is also a theme of showing Jesus Christ as an apothecary, as the universal healer, a concept which will be further explored later in this chapter.

#### 4.7. Thematic use of spices in specific conditions

The above sections analysed various physician and household books showing that spices were used as an ingredient in food or separately in medicinal receipts to treat medical conditions during the early modern period. This section reviews the use of spices on a thematic basis. Two medical conditions are considered, one relating to poisoning and the second relating to impotence. These conditions are mentioned in almost all physician books, and it is therefore interesting to see how they were treated (using spices) to the end of the early modern period. Guarding against or

<sup>820</sup> Anonymous, (1800)

recovering from poisoning has a long history. Galen wrote about ‘*Mithridatium*,’ a cure for poisoning in the second century AD. This is a reference to Mithridates, King of Pontus, in 120 BC, who found the antidote for each poison individually and then compounded it into one antidote, thereby producing a universal antidote, which he took daily. This contained anywhere between 41 and 55 ingredients, including spices such as long pepper, black and white pepper, and cinnamon. Also known as Theriac, it took forty days to prepare and then twelve years to mature.<sup>821</sup> The *Leechbook of Bald* dating to circa 900-950 AD refers to King Alfred sending a note to Patriarch Elias of Jerusalem for medicines including Theriac. It also gives a formulation for this medicine, which includes spices.<sup>822</sup>

Theriac became extremely popular across Europe and was sold in England as *Venetian Treacle* (Treacle as a corruption of Theriac). Griffin reports that during the reign of Elizabeth I, the only person authorised to make Theriac was William Besse, an apothecary in Poultry, London, and explains how physicians audited apothecaries and, in many cases, focused on Theriac and its quality. Many goods were seized and burnt publicly.<sup>823</sup> Given the strong history, the expensive ingredients, and the attraction for the rich, nobility, and famous audience, this was frequently prepared in public. The LP of 1618 includes detailed instructions for producing Theriac, and by that time, three apothecaries were allowed to make it.<sup>824</sup> The Royal College of Physicians published advice for the Great Plague of 1665, which included London Treacle/Mithridatium.<sup>825</sup> Culpeper mentions Venetian Treacle as a good companion to water of sorrel for pestilential fevers.<sup>826</sup> He also refers to this as London Treacle, and its formulation is mentioned several times in the London Dispensatory. William Heberden wrote a pamphlet in 1745, expressing doubts about the efficacy of this product by focusing on its ‘*injudiciousness, the ostentation and wantonness*,’ as well as its mystical production way.<sup>827</sup> Obviously, an attack on the use of rare and expensive materials, including spices. This paved the way for medicine to be increasingly re-examined for its appropriateness and could have led to the following year’s edition (1746) of the LP being the last time that Theriac was included. In the previous section, we saw an apothecary’s notebook dating to 1800 that still mentions Theriac, although it would appear to be meant for animal/cattle use. Griffin remarks that the *German Pharmacopoeia* included Galenic Theriac with viper meat until 1872 and the *French Pharmacopoeia* until 1884.

The second thematic condition to be evaluated is impotence (and in some cases-variants thereof, such as increasing fertility, demands for sons rather than daughters, longer-lasting erections, venereal diseases, and the like). Finucci provides a fascinating story of how Duke Vincenzo Gonzaga of Mantua (1562–1612) sent an apothecary all over Europe and to the Americas to procure an aphrodisiac for him. She gives a quick overview of what was recommended at the beginning of the early modern period, during the duke’s lifetime. She refers to the Galenic Theory and mentions that phallic-shaped food such as eggplant and broad beans were recommended for improving potency.<sup>828</sup> This is based on the ‘*Doctrine of Signatures*’ during the Saxon times, stating that ‘*every plant that is of use to man has been marked by God in a way that reveals its intended use*’.<sup>829</sup> Animal

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<sup>821</sup> Watson, (1966)

<sup>822</sup> Bald, (mid-10<sup>th</sup> century)

<sup>823</sup> Griffin, (2004), p317-325

<sup>824</sup> Anonymous, (1618)

<sup>825</sup> Anonymous, (1665)

<sup>826</sup> Culpeper, (1720), p111

<sup>827</sup> Heberden, (1745)

<sup>828</sup> Finucci, (2008), p523-57

<sup>829</sup> Shah, (2002), p433-41

meat was lascivious; pigeons, cockerels, and pigs were suggested, as were shrimps and oysters. Not just the meat, but the animal penis and/or testicles (of animals such as horses, donkeys, cocks, and bulls) were eaten (raw, cooked, dried, and ground into a powder, which included spices). She mentions poultices made of oils and fat mixed with pepper to enhance the production of semen. A recipe talks about eggs cooked with myrrh, cinnamon, and pepper. Cinnamon and vanilla were frequently procured and added to dishes to increase potency. Finnuci mentions how the Paracelsian mineral-based chemical approach started to take hold from the end of the sixteenth century when precious metals and a torrent of new inorganic and organic materials from the New World started to be prescribed to cure impotency and improve sexual desire. Many New World roots, herbs, plants, insects (tarantulas, worms, grasshoppers, and wasps), and other items were prescribed for impotency, frequently combined with the old world's ingredients mentioned above, such as spices and animal parts.

Evans surveyed the use of aphrodisiacs to address a variety of fertility-related illnesses during the early modern period. She explains how men and women were consumers of medicine in a well-established market and that they took advice from various practitioners (both amateur and professional) before purchasing a variety of medicines. They reviewed manuscripts, gathered advice from relatives, and bought the services of various medical practitioners such as barbers, surgeons, apothecaries, and physicians. She mentions how various substances, including spices such as mustard, pepper, cinnamon, and ginger, were prescribed in a variety of formulations: dishes were frequently dressed in pepper to stimulate sexual desire, and male members were rubbed with various oils and ointments containing pepper and myrrh.<sup>830</sup> Doctors prescribed spices quite regularly. For example, a Dutch physician (whose book was translated into English), Isbrand van Diemerbroeck, described how he treated a man for a splinter in his thigh and remarked: *"The countryman complained to me of another malady no less ungrateful to his wife, that his inclinations to conjugal performance were utterly extinguish'd, and his venereal ability quite lost, which malady he said had befallen him but since the cure of his thigh. Presently I suspected that this languidness proceeded from the use of the camphire, which I had mixed with the balsam and other plaisters; so that I forbore the farther use of it, and gave the countryman electuary of dysatyrion to take, and prescrib'd him a nourishing dyet of hot meats, with spices, leeks and onions, which restored him to that degree that he followed his wives agriculture as he was wont to do."*<sup>831</sup>

The final reference reviewed for this condition is the previously referenced *Aristotle's Masterpiece*, which could be considered as the seminal document in England when it came to sexually related topics. An indication of its popularity is that it went into 130 editions. The author mentions spice usage to increase the seed: *"Spices good to increase seed are cinnamon, cardamom, galangal, long pepper, cloves, ginger, saffron; asafoetida, taken a dram and a half in good wine, is very good for this purpose."*<sup>832</sup> Echoing Finnuci above, 'Aristotle' recommends eating the genitals of a variety of animals such as foxes, bulls, bucks, rams, and bears to increase the natural seed.<sup>833</sup> Spice usage and other non-scientific means to improve potency and impotence were prescribed well beyond the early modern period. As Sadroni reports, it was only when Viagra recently arrived that these non-scientific methods were reduced.<sup>834</sup> However, they have not been removed completely;

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<sup>830</sup> Evans, (2014), p90-91, 102-103, 176

<sup>831</sup> Diemerbroeck, (1689)

<sup>832</sup> Aristotle, (1684), p132

<sup>833</sup> *ibid*, p131-33

<sup>834</sup> Sadroni, (2001), p303-7

an example thereof is the prevalence of using rhino horn in many cultures to improve potency. The analysis of these two thematic conditions shows how spice usage evolved over time. In the next section, the reduction in the use of spices to address medical conditions due to improvements in medical and scientific knowledge is explored.

## 4.8. Spices in Religion

The period of early modern England (and on the continent) was beset with religious upheavals. At the beginning of the period, around 1500 or so, the Catholic Church held supreme power. The Pope, the hierarchy of archbishops, cardinals, and bishops down to the parish priests, held extraordinary power over the common person, from birth (baptism) to marriage, last rites, burial, day to day engagement and interaction, establishment, and in many cases, the arbiter of local cultural norms. Day-to-day behaviour was driven not just by the calendar but by religiously mandated periods such as Lent and punctuated by frequent saint days (many times related to farming events such as ploughing, sowing, and harvesting) and festivals such as Christmas & Easter.

That said, the impact of Martin Luther (1483-1546) and John Calvin (1509-1564) upended the Catholic structure by changing how Europe and England saw God and his relationship with the world. The Catholic view that the Pope and his hierarchy were the source of religious truth was challenged by the view that the Bible was the source of religious truth. The role of the church as mediator between God and man diminished as the direct relationship between man and God was propounded. The heavy encrustation of Latin-based ritual religion with Catholicism was replaced with a simpler way of practicing religion. The Reformation sparked religious wars, spawned new churches, and indeed sparked a counter-Reformation. In England, the separation of the Church of England from Rome by Henry VIII beginning in 1529 to 1537 moved England in a similar trajectory, although one can argue it settled down in a middle way between the Roman Catholic and Protestant traditions. By the time the early modern period ended around 1750-1800, religion had become significantly marginalised as a defining feature of Western and English culture.<sup>835</sup>

In the previous chapter, we have explored how strong a connection was established between the use of spices in food and medicine due to religious conditions such as dietary restrictions, feast days, mentioned in the Bible, etc. So, when religion started to be marginalised, the strict conditions laid down by the Catholic Church (in terms of using spices or related matters) started to be relaxed. Still, it would be beneficial to trace back explicitly how spices were entwined in Christian thought (and to a lesser extent Judaism). As Barnett points out, Protestants defined a new relationship between food and eating considering the Reformation from Elizabeth I's rule to the civil war. Reformers in England tried to desacralize Catholic notions of holy food and contributed to the slow reduction of the use of spices in English (and indeed many other European nations where the Reformation was strong).<sup>836</sup> Religion and spices have a strong connection. Descriptions of paradise were replete with references to spices. An example is from Peter Damian (1007-1072) who wrote copiously about Christianity in a time of utter turmoil and corruption in the Italian Catholic Church. He described Paradise as

Harsh winter and torrid summer never rage.

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<sup>835</sup> Curry, (2010), p207-41

<sup>836</sup> Barnett, (2020), p507-27

An eternal spring puts forth the purple flowers of roses.  
Lilies shine white, and the crocus red, exuding balsam.  
The meadows are verdant, the crops sprout,  
Streams of honey flow, exhaling spice and aromatic wine.  
Fruits hang suspended, never to fall from the flowering groves.<sup>837</sup>

Many believed that spices grew in Paradise. St. Isidore of Seville (560-636) describes Paradise as planted with every kind of wood and fruit-bearing tree, which would include spice-bearing trees and plants (Brehaut, 1972, p245). As Genesis 2:10-14 KJV states, *“And a river went out of Eden to water the garden; and from thence it was parted and became into four heads. The name of the first is Pison; that is it which compasseth the whole land of Havilah, where there is gold; and the gold of that land is good; there is bdellium and the onyx stone. And the name of the second river is Gihon; the same is it that compasseth the whole land of Ethiopia. And the name of the third river is Hiddekel: that is it which goeth toward the east of Assyria. And the fourth river is Euphrates.”*<sup>838</sup> These rivers would transport spices from Paradise downstream. As Turner explains, Egypt was the source of spices (where spices from the Moluccas and India landed on the East Coast, were shipped downstream to Cairo and Alexandria), and then European ships would land them in Italy to be transported north or consumed in Italy itself. Jean Sire de Joinville (1224-1317) talks about how spices were netted by fishermen on the Nile. An example of this association is with grains of paradise, which indicated its origin to be paradise. These grains were the fruit of the *Aframomum Melegueta* tree from Africa, which will make its way up to Africa and was used as spices.<sup>839</sup>

The hymn *“Dulcis Jesu memoria”* talks about spices in heaven in a unique way indicating that spices and wine were entwined with heaven,

Sweet is the remembrance of Jesus in the true joy of the heart.  
But his presence is sweet beyond honey and all things . . .  
They who taste you [Jesus] still hunger, and they who drink you still thirst.  
They are not able to desire anything except Jesus, whom they love . . .  
Jesus, glory of the angels, [you are] a sweet song in the ears,  
in the mouth wonderful honey,  
the spiced wine of heaven in the heart.<sup>840</sup>

The connection of spices to religion is not just with Christianity but goes back much further. For example, incense in temples or in religious ceremonies across Asia, Asia Minor, the Mediterranean etc. was common across ancient civilisations, as mentioned by Ovid, Horace, Seneca, Virgil, Pliny, Herodotus, and Philostratus to mention a few. The connections between gods and olfactory materials, especially spices, were well established.<sup>841</sup> As Exodus 30:22-23 states,

Moreover, the Lord spoke to Moses, saying, 'Take also for yourself the finest of spices: of flowing myrrh five hundred shekels, and of fragrant cinnamon half as much, two hundred and fifty, and of fragrant cane two hundred and fifty, and of cassia five

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<sup>837</sup> Turner, (2004)

<sup>838</sup> The Bible has references to spices such as Ezekiel 27:19 *“and casks of wine from Izal in exchange for your wares: wrought iron, cassia and calamus”*.

<sup>839</sup> Turner, (2004), p46-7

<sup>840</sup> Bynum, (1987), p66

<sup>841</sup> Turner, (2004), p261-95

hundred, according to the shekel of the sanctuary, and of olive oil a hin. You shall make [a]of these a holy anointing oil, a perfume mixture, the work of a perfumer; it shall be a holy anointing oil...

This started to bring spices into religious ceremonies. Josephus writing around AD 93 talks about how the priest of the Temple handed over cinnamon, cassia, spices, etc. to the Romans.<sup>842</sup> Judaism still retains a flavour of spices, such as in the Havdalah ceremony marking the end of the Sabbath where the speaker blesses the wine and spices with the word, "*Blessed art thou, O Lord, our God, creator of the universe, creator of all kinds of spices*".<sup>843</sup>

FIGURE 133 - JEWISH SPICE CONTAINERS IN V&A MUSEUM – LATE FIFTEENTH CENTURY



The spice reference meant that spices became an important fixture in religious ceremonies. The images in Figure 133 show spice containers in The Victoria and Albert Museum. The one on the left dates to late the seventeenth/early eighteenth century, which was used in Jewish worship, during the Havdalah ceremony that marks the end of the Sabbath. (Anonymous, late seventeenth century). The spices are blessed, and the box is passed around for all to smell. After the ceremony, the new week starts. Another unusual example of a Jewish fifteenth-century spice container is given on the right-it was previously used in Christian worship as a reliquary. A small cross was attached to the top, and a relic was placed inside the holder, sealed with red wax. The wax is just visible through the tracery window.<sup>844</sup>

Dionysius Exiguus (6th century AD) wrote of the head of John the Baptist, which was sprinkled by the aromas of spikenard, saffron, cinnamon, and all spices. The Song of Songs is replete with

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<sup>842</sup> Kottke, (1994), p128

<sup>843</sup> Jacobs, (1999), p84

<sup>844</sup> Anonymous, late 15<sup>th</sup> century)

references to spices. Saints were frequently said to have the aroma of spices, even when disinterred well after burial, such as St. Stephen, Polycarp, St. Meinrad, Venerable Bede, St. Lidwina, etc.<sup>845</sup> This is not to say that there was unanimity in using aromatic substances or incense in Christian worship. For example, an early Christian writer, Justin Martyr (c100-160 CE) said that God '*has no need of streams of blood, libations, and incense.*' He emphasised that the sacrificial economy of Christianity was distinct from that of both the pagans and the Jews. Similarly, Athenagoras (c133-190 CE) went as far as to say of God that 'He is Himself perfect fragrance' and thus does not need perfume sacrifices.<sup>846</sup>

The anointing oil and other oils still exist within Christianity. For example, the Oil of Chism is mentioned in the liturgy of the Church of England, which states, "*Oil mixed with fragrant spices (traditionally called chrism), expressing the blessings of the messianic era and the richness of the Holy Spirit, may be used to accompany the confirmation*".<sup>847</sup> The anointing of Jesus before his burial<sup>848</sup> and after<sup>849</sup> was one of the main events where spices were associated with him. Nicodemus, as mentioned in John 19:39, brought myrrh and aloes, about a hundred pounds in weight. 19:40 states that they prepared Jesus' body for burial by wrapping it in linen cloths with spices.<sup>850</sup> This is an extravagant number of spices, an indication of the respect he was held in. Another interpretation is that this follows the Ancient Egyptian mummification ritual, delaying the decay of the body and expecting that with the use of spices, Jesus will live again. This tradition was continued; when Peter died, Marcellus had him embalmed with spices, myrrh, milk, and wine.<sup>851</sup>

Mary Magdalene used spiced oil or oil of spices (myrrh) to prepare his body for burial.<sup>852</sup> After his burial, the apostles met in the house of St. Mark; they gathered the spices and brewed the original holy Myron oil so that each of them could take a jug of oil containing the material substance of Christ's burial. Bishops would normally brew up a special batch of Myron oil and add a little oil from the previous batch, and therefore there is material continuity between the oil used today and the original oil.<sup>853</sup>

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<sup>845</sup> Turner, (2004), p293-4

<sup>846</sup> *ibid*, p286

<sup>847</sup> Anonymous, (2006)

<sup>848</sup> The event in Matthew 26, Mark 14, Luke 7, and John 12.[3] ...The perfume or oil is spiced, for example in Mark 14:3–9, ...While he was in Bethany, reclining at the table in the home of Simon the Leper, a woman came with an alabaster jar of very expensive perfume, made of pure nard (spikenard).

<sup>849</sup> The four canonical gospels from Mark, Matthew, Luke, and John, (66 and 95AD), on the evening of the Crucifixion, Joseph of Arimathea wrapped the body in a linen cloth and laid it in a tomb. He was assisted by Nicodemus who got the burial cloth and included spices as per Jewish ritual. Also "*And when the Sabbath was past, Mary Magdalene, and Mary the mother of James, and Salome, had bought sweet spices, that they might come and anoint him. And very early in the morning the first day of the week, they came to the sepulchre at the rising of the sun*" (Mark.16:1-2 KJV).

<sup>850</sup> Sylva, D, (1988)

<sup>851</sup> McGowan, (1999), p189

<sup>852</sup> This could be related to the Ancient Egyptian art of embalming where spices were used extensively across most of the Ancient Egyptian period, for example see Baumann, B.B. 1960. "The botanical aspects of ancient Egyptian embalming and burial." *Economic Botany*, and El-Aminb, Gomaa Abdel-Maksouda and Abdel-Rahman. 2011. "A review on the materials used during the mummification processes in Ancient Egypt." *Mediterranean Archaeology and Archaeometry*.

<sup>853</sup> [https://aeon.co/essays/frankincense-and-myrrh-were-not-only-holy-but-heretical-too?utm\\_source=Aeon+Newsletter&utm\\_campaign=c41dfebee1-](https://aeon.co/essays/frankincense-and-myrrh-were-not-only-holy-but-heretical-too?utm_source=Aeon+Newsletter&utm_campaign=c41dfebee1-)



FIGURE 134 - JESUS AS THE APOTHECARY – 1519-1528, 1731



Jesus is also sometimes considered to be an apothecary or physician helping heal the sick, as seen in these two artworks in Figure 134. The left image shows Jesus as the apothecary who is treating Adam and Eve of their original sin. This formulation during the early modern period (sixteenth century) is clearly identified as him using spices and other herbs/minerals/salts to address sins and other ailments.<sup>854</sup> On the right is an oil painting by Marie Appeli, 1731, which suggests Christ as a universal healer.<sup>855</sup> These, when put together with the arguments in the previous chapter related to spices and medicine, indicate that religion with spices as medicines was present in common culture. It was not always that spices were associated with Godliness. For example, onions and garlic were associated with Satan; when Satan was cast out of the Garden of Eden, onions sprang from the soil where his right foot stepped and garlic from the soil where his left foot stepped.<sup>856</sup> John Mirk's *Festial*, which is a fifteenth century homilies collection, suggested that the scent of the Virgin Mary was like a spice shop, "for as spycers schoppe smellbe swete of diverse spices, soo scho for be presens of be Holy Ghost bat was yn hur and be abundance of vertues bat scho smellyth swettyr ben any worldly spycery".<sup>857</sup>

As mentioned above, there is a gruesome link between spices and religion (which is further proof that ancient Egyptian embalming techniques were followed through into later ages). To embalm a body and prevent putrefaction, there seem to be two techniques practiced during the Middle Ages and into the early modern period. The first technique is to stand the body on its feet and compress the stomach to expel the faeces. Then inject the body with a concoction comprising of

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<sup>854</sup> Anonymous, (1519-1528)

<sup>855</sup> Appeli, (1731)

<sup>856</sup> Wilson, (1953), p94-104; Grieve, (1971), p230

<sup>857</sup> Woolgar, (2006), p118-9

aloe, myrrh, acacia, ramic (which is nutmeg & gallia muscata), alipte, the skin of pomegranates, cypress nuts, nutmeg, sandalwood, aloeswood, salt, cumin, and alum dissolved in vinegar, and rose water. The procedure is like the ancient Egyptian embalming procedures including wrapping the body in strips of tape. The coffin (which is lead) is sealed, and odoriferous herbs such as roses, marjoram, mint, balsamithea, wormwood, and others are placed within. The injection of the spicy mixture seems to liquefy and preserve the inner organs. The second form is simpler, where the belly is cut open and all the entrails are pulled out, then the cavity is stuffed with the spicy powder mentioned above along with salt and cumin. Then the body is sewn back, sometimes wrapped with tape, and then into a leaden coffin. Rollo-Koster also describes how variations of this theme happened with the embalming of popes, and in one, the throat was stuffed with herbs, spices, and cotton along with anointing the body with balsam. Whilst this is an indication of how Popes were embalmed, given the strength of belief in Church rituals, at least the royalty, higher reaches of the religious orders, the aristocracy, and the wealthy could have sought to have similar rituals using spices, especially when the body must be shown to mourners for a period of days after death or when it must be transported elsewhere for burial.<sup>858</sup> Corbineau et. al have reviewed the plants and aromatics used for embalming in the late Middle Ages and Modern period and have determined the use of spices and other plants across the continent.<sup>859</sup>

This practice may have continued till modern scientific theories, such as Lister's theory, would have shown that the body just needs to be cleaned and buried as soon as possible, without needing spices or other rituals to help in the voyage to the afterlife. Burial traditions are a further area of research, especially looking at the interactions between Ancient Egyptian, Ancient Greek, Roman, Jewish and Christian traditions.<sup>860</sup>

Food and Christianity have been explored in the Food and Spices chapter; few additional pertinent points are raised in this section. Food as a way of religious practice is crucial in defining religion and is now becoming more and more important in academic research.<sup>861</sup> Whether it be for imbibing specific foods, at specific times, prepared in specific ways, or shunning some food or even all of it, these all-dietary restrictions were crucial in defining how food (and within spices) was used, and thus demand rose and fell.<sup>862</sup> It must be noted that Christian food practices was not only meant to define what a Christian was but also what it was not. For example, the strong strand of Christian asceticism running through Christian history in terms of eating simple food, rejecting meat, and abjuring wine was to set Christians apart from Roman and Pagan traditions. Despite this, to eat and drink as per Christian Traditions *is* sociability and community, not just a sign of it.<sup>863</sup> This core identification of food with Christian ritual was predominant across most of pre-early modern England and Europe. For example, the sin of Gluttony was not just related to eating too much but was much richer. As Thomas Aquinas said, the sin included eating food that was too expensive or difficult to cook, eating too early, or eating too quickly.<sup>864</sup> This would presumably include eating spicy food, as spices were expensive. The other example is the widespread acceptance and knowledge of the Last Supper, an iconic scene that represents a meal, community, betrayal, solidarity, the first

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<sup>858</sup> Rollo-Koster, (2017)

<sup>859</sup> Rémi Corbineau et al., (2018a); Rémi Corbineau et al, (2018b)

<sup>860</sup> Green, (2008), p145-76

<sup>861</sup> Patterson and Banks, (2013), p433-43

<sup>862</sup> Bell, (1985)

<sup>863</sup> McGowan, (1999), p272

<sup>864</sup> Miller, (1997), p92-112

Eucharist, etc., which has been painted and displayed in countless ways and times over the centuries.

Grummet gives a good overview of the Galenic perspective of hot, moist, cold and dry got entwined with food. Early Christian authorities such as Jerome and Basil of Ancyra propounded theories that Christians should imbibe cold and dry foods such as vegetables rather than hot and moist dishes such as cooked meats, as they warm the body and lead it to temptations. He points out that these theories were promoted by health reformers (many of them Christians) and were present till the start of the twentieth century.<sup>865</sup> In 1829, towards the end of our research period, Dr Sylvester Graham invented the cracker biscuit, which was supposed to be a digestive biscuit but was dry to curb sexual urges. Similarly, at the start of the twentieth century, prominent Christian Kellogg brothers and others produced breakfast cereals and meat substitutes such as peanut butter to wean Americans off their pork, beans, and pie breakfasts.

Grummet points out the religious traditions around the baking of bread, the feast days, and the seasonal impacts of festivals such as Lent, where red meat, poultry, dairy, and eggs were forbidden. Shrovetide included eating meat; items such as Simnel Cake were made (which had spices like saffron), hot cross buns on Good Friday, Easter eggs, an increase in fish consumption with many spices, etc. These have also been discussed in Chapter 2. Going back to the original argument, Protestants and Anglicans started to expunge celebrations or rituals not found in scripture. This went to extremes sometimes when Puritans in seventeenth century England abolished Christmas, which descended from Saturnalia and other saint days that were previous pagan holidays.<sup>866</sup> The Reformation therefore slowly changed dining from a communal event anchored around church events to a more private event with its own rituals. The increasing secularisation of religion, the breaking of the bonds of church as the sole intermediary between God and man, meant that other dining traditions, such as dining in commercial establishments such as pubs and taverns, became common, whilst the rich and elites ate and drank in their own homes. In private, the strictures around religion, fasting, diet, prohibitions, etc. were observed more in abeyance.

As Albala says, prior to the early modern period, Christian tradition seems to be fast and feast to simplify matters hugely. Post-Reformation, the strictures fell away; fasting was no longer rigidly observed and became obsolete. The sumptuary laws, which controlled the use of luxury clothing, food, banqueting and feasts, etc., were used as a weapon by both Catholics and Protestants to buttress their point of view. So Catholic regions created a very large number of Sumptuary laws in France, Germany, Italy etc., restricting types of meat as well as the number of meat dishes. On the other hand, in England, only one law was passed on food, and that too before 1517 when the break happened between Henry VIII and the Pope. So, Henry VIII allowed all meats but restricted it to one dish. Sometimes the laws went into huge detail, such as, “neither an archbishop, bishop, nor earl has at his mess but 8 dishes of meat, nor an abbot lord prior nor dean has at his meals but 6 dishes of meat, nor a baron nor freeholder has but four dishes of meat at his meals, nor a burgher nor other substantial man spiritual not temporal has at his meals but 3 dishes and but any kind of meat in every dish.” Or dinner must begin at 12 o’clock and finish at 4. Laws started to include bans on sugar, confectioneries, spices, etc. Sumptuary Laws fell out of favour after the Reformation.<sup>867</sup> In terms of material culture-the fragrant smoke, the exquisite workmanship of the censers-all connected the

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<sup>865</sup> Grummett, (2014), p17-24

<sup>866</sup> Albala and Eden, (2011), p217

<sup>867</sup> *ibid*, p63

worshipper optically and via smells with the idea that Heaven was with them and Heaven had spices. This helped the spread of the usage of spices in religious ceremonies, not just in temples but also at home.

In conclusion, Christianity has a deep and abiding relationship with food and spices. Before the Reformation, despite significant restrictions, meat and fish, which were highly spiced, were allowed, although fasting was encouraged as well as simple food. Post-Reformation, due to the increased secularisation of society, the religious mandates behind food started to drop off, and people reduced their spice consumption due to many other factors that have been explored previously.

## 4.9. Spices in Magic

While one may have assumed that based on popular present-day culture that spices were used in magic, documentary evidence for their historical usage is sparse. Not least because the topic itself was secretive and hence resistant to public publication. These recipes were also, understandably, almost impossible to evaluate or replicate given the magical results so noted. Secondly, due to the strong antipathy towards witches and magic, which frequently led to witches and magical experts being hounded and burnt alive at the stake, it was in their interests to suppress any form of evidence that could lead to their prosecution,<sup>868</sup> and eventually some 50,000 executions took place across Europe and North America.<sup>869</sup> Tourney reports that between 1645 and 1646, Matthew Hopkins led the execution and hanging of 200 witches in Essex and 68 witches in Suffolk.<sup>870</sup> Thirdly, whilst some records have survived, usually all records, books, receipt books, prescriptions, or any documentation were ritually burnt during the trials, as noted by Nicholas Eymericus, who talks about his role as an inquisitor in the mid-fourteenth century.<sup>871</sup>

Reginald Scot's book was first published in 1584 and was in constant print and in several editions till as late as 1886. In this book, spices are talked about more as objects of desire and to show magic rather than ingredients by themselves. He talks about how charlatans and jugglers can deliver pepper, ginger, and other powders out of the mouth after eating bread, the powder hidden in the bread in a little bladder or paper pouch. He mentions how fumigations are a must to produce spirits. "For spirits under the order of Sol (sun), saffron, musk, laurel, cinnamon, ambergrieece, cloves, myrrh and frankincense, musk, and the Balsamik Tree mixed up together with the brain of an eagle, and the blood of a white cock, being made up like Pills, or little Balls, and put upon the tripod" .... He talks about how Magicians are also very particular about colour-such as saffron-dyed clothes to represent the sun.<sup>872</sup>

Agrippa's *Three Books of Occult Philosophy* was first fully published in Cologne in 1533 and then published in English in 1651 in London and has some references to spices. Agrippa lived during tumultuous times, including the Lutheran Reformation and Tudor times. He travelled widely across Europe and this book was extremely popular across Europe.<sup>873</sup> For example, he links herbs

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<sup>868</sup> Burns, (2003)

<sup>869</sup> Levack, (2013); Behringer, (2004), p149-51

<sup>870</sup> Tourney, (1972), p143-155

<sup>871</sup> Hill, (2019), p68-70

<sup>872</sup> Scot, (1584), p280, 535, 537

<sup>873</sup> Yates, (2001), p53-70

and spices to planets, such as mints are under Jupiter, whilst coriander is associated with Venus. Like Scot, he says that fumes of various ingredients have various results; for example, burning coriander, smallage, henbane, and hemlock will cause spirits to come together. Another recipe to bring spirits together involves lignum aloes, pepper, musk, and saffron with the blood of a lapwing. He refers to images of the mansions of the moon, and in the sixteenth house, an image of a man sitting in a chair perfumed with nice smelling spices. He refers to Pamphila, a sorceress whose house had all kinds of spices. The sun is associated with mint, mastick, zedoary, saffron, balsome, amber, musk, yellow-honey, lignum aloes, cloves, cinnamon, calamus, aromaticus, pepper, frankincense, sweet majoram, and libanotis, which Orpheus calls the sweet perfume of the sun. He refers to some perfumes made up of spices such as *“A perfume made with coriander, saffron, henbane and parsley (smallage) and white poppy ana (i.e., ‘of equal quantity’) bruised and pounded together. If any shall dig gold or silver or any precious thing the moon being joined to the sun in the lower heaven let him perfume the place with this suffumigation”*.<sup>874</sup>

Baker reviews the common English household use of magic. A charm for protection from enemies was made from cast iron and engraved at the time of the new moon, but before wearing it, it needed to be fumigated with the smoke of burnt spirits of Mars (a mixture of saunders, frankincense and red pepper). Baker also talks about how Reginald Scot, in his *Discoverie of Witchcraft* book, refers to a fumigation conducted with charcoal, perfumed with frankincense and cinnamon. Following the previous reports for spirit summoning, Baker reports on an extract from a manuscript in the possession of Raphael that mentions coriander amongst other herbs to summon spirits. If spirits do not appear, then *“if, at the third rehearsal of the above mystic ceremonial, the spirit refuses to appear, prepare a fume of sweet-smelling savours, such as frankincense, aloes, cinnamon, oil, olives, nutmegs, musk, cassia, roses, saffron, and white wax, which must be burnt, commixed together, on a fire consecrated for the purpose.”* Baker talks about a fumigation for dreaming that also involves saffron, as noted by Moses Long of Gloucestershire (1683).<sup>875</sup>

Even though witches were said to be experienced in making potions, the evidence for actual potion ingredients (which would allow the exploration of if spices were used) and the way of making them seem to be rare on the ground. Only a very few references were found. The first one was a report on what witches could have used by Francis Bacon in his *Sylva Slyvarum* (1627) book. Bacon’s book was on natural history observations, but some of them related to such ointments, such as *“The ointment that witches use is reported to be made of the fat of children dug out of their graves; of the juices of smallage, wolf-bane, and cinquefoil, mingled with the meal of fine wheat. But I suppose that the soporiferous medicines are likeliest to do it, which are henbane, hemlock, mandrake, moonshade, tobacco, opium, saffron, poplar leaves, etc.”* His position is that witchcraft does not exist, and this salve or ointment is delusional if people think witches are making it.<sup>876</sup>

Bever, in his book, *The Realities of Witchcraft and Popular Magic in Early Modern Europe: Culture, Cognition and Everyday Life*, where he studied archival material in Wurttemberg, Germany, relating to this matter, relates how in one case, a woman in Hesse testified that in 1596, she and her companions used a salve that included tansy, hellebore, and ginger which they rubbed on their feet. The ginger is almost incidental, as tansy and hellebore are substances that can cause paralysis, loss of consciousness, or heavy narcotic influence. The lady concerned admitted that this

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<sup>874</sup> von Nettesheim, Cornelius, and French, (1651) p54, 66, 87, 88

<sup>875</sup> Baker, (2018), 242, 449

<sup>876</sup> Bacon et al. (1877-78), p664

salve made her fly. Bever does not report any other spice usage.<sup>877</sup>

Another reference to spices and magic relates to the Hand of Glory, which is a dried and preserved hand of a male murderer who has been hanged. De Givry quotes Petit Albert, who in 1722 describes how to make a Hand of Glory (which includes using long pepper).

“Take the right or left hand of a felon who is hanging from a gibbet beside a highway; wrap it in part of a funeral pall and so wrapped squeeze it well. Then put it into an earthenware vessel with zimat, nitre, salt, and long peppers, the whole well powdered. Leave it in this vessel for a fortnight, then take it out and expose it to full sunlight during the dogdays until it becomes quite dry. If the sun is not strong enough, put it in an oven with fern and vervain. Next, make a kind of candle from the fat of a gibbeted felon, virgin wax, sesame, and ponie, and use the Hand of Glory as a candlestick to hold this candle when lighted, and then those in every place into which you go with this baneful instrument shall remain motionless”.<sup>878</sup>

The use of garlic to repel vampires is well known.<sup>879</sup> Garlic has been known and used to guard against evil and magical beings or spells in a variety of ways, as noted by Dugan, who undertakes an exhaustive search of how garlic was used in folklore to guard against evil, as a weapon, as a reference to Satan, for protection against ghosts and imps, against the evil eye, against nautical dangers such as shipwrecks, neonatal problems, and against legal problems. He also talks about how garlic was included in talismans to guard a man against witchcraft, elfin race, and nocturnal goblin visitors. Besides this, garlic can also protect against women who want to have carnal relations.<sup>880</sup>

It should also be noted that much of the evidence on where the ingredients come from is the result of the torture of the witches, and there is quite a strong possibility that the mention of some of the ingredients, whether it's baby fat, wolf fat, donkey fat, or these other narcotic/hallucinogen herbs and plants, was confessed just to confirm popular views on what these ointments, unguents and salves would contain rather than actual usage. In conclusion, there is evidence that during the early modern period, spices were used, for example, garlic in magic or magical prevention and saffron mainly in fumigations.

## 4.10. Spices in Perfumes

The connection between perfumes and spices is age-old, one of the main reasons why spices were and are so desired is because of their aroma, and it is natural that they will be used for preparing perfumes. The first documented version of perfumes being made comes from Babylonian times in 1200 BC where a lady called *Tapputi* documents how to make a perfume with myrrh, calamus (a plant), and other materials.<sup>881</sup> Perfume-making traditions existed in all ancient cultures, including a recently excavated perfume factory in Cyprus, dating to the Bronze Age, where spices

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<sup>877</sup> Bever, (2013), p78

<sup>878</sup> de Givry and Locke, (1931), p181

<sup>879</sup> Gallagher, (2017), p13-15. 142-3

<sup>880</sup> Dugan, (2016)

<sup>881</sup> Levey, (1956), p376-89

were used in the perfumes.<sup>882</sup> A good comparative review of how scents became associated with the sacred in early Christianity and Islam is covered by Thurlkill.<sup>883</sup> The Bible talks about a perfume in Exodus 30:22-23, which included myrrh, cinnamon, cane, cassia and in Exodus 30:33-35, it states, *Then the Lord said to Moses, "Take for yourself spices, stacte and onycha and galbanum, spices with pure frankincense; there shall be an equal part of each. With it you shall make incense, a perfume, the work of a perfumer, salted, pure, and holy. You shall beat some of it very fine and put part of it before the testimony in the tent of meeting where I will meet with you; it shall be most holy to you"*. After having cast Joseph into a pit, his brothers talked about a caravan on its way from Gilead to Egypt in Genesis 37:25, *"with their camels bearing spicery, and balm, and myrrh."*

Sell walks through the history of perfumes and spices, such as how the Greeks used rose, saffron, frankincense, myrrh, violets, spikenard, cinnamon, etc. In Roman times, Pliny the Elder described one of the earliest ways of distillation, and the Romans had a flourishing industry and use of perfumes. Petronius wrote, "Wines are out of fashion, mistresses are in, rose leaves are dated, now cinnamons are the thing"-imported all the way from India. The art of perfumery developed much further in the Islamic world, not least due to religious strictures. Then, via Muslim Spain and the crusaders learning about perfumes in the Middle East, perfumes started to appear in Europe. The use of spices as aromatic substances during the plagues in Europe has already been mentioned. King Henry I of England (reigned 1100-1133) granted a heraldic shield of 3 red gloves and a gold spice box on a blue background to the Guild of Perfumers in England. These gloves are related to perfumed gloves which will be discussed further in the next section. The Black Death of 1347-1351 boosted the use of aromatic products in Europe as the plague was caused by foul air, as noted in the Medicines chapter. Sell helpfully lists out the major alchemists, and one can see how the number of published books explodes after the 1500s when people start knowing and wanting more information about chemistry, botanicals, and the like.<sup>884</sup>

The understanding and usage of spices to perfume the air were well known. For example, Dugan notes how a heretic martyr called Richard Wyche was burnt alive for heresy in 1440. His ashes then started to be sought for relics. The authorities then arrested several Londoners who encouraged the cult of Wyche, including one Thomas Virley. He was accused of "receiving the offering of the simple people" and of taking Wyche's "ashes and medlid thaim with powder of spices," so that "the simple people were decyved, wenyng that the swete flavour hadde commed of the asshis of the ded heretic." This point is also appropriate for the spices and religion section, where dead martyrs are almost always considered to be truly holy and blessed when their caskets are opened much time after their death and their bodies are either not decomposing and/or smell of sweet spices and perfumes.<sup>885</sup>

Perfumes were frequently distilled and made at home, as can be witnessed by the multiple references to perfume making in the receipt books discussed in Chapter 2. More than 80 such books were reviewed to determine any receipts for perfumes. Many of the books had receipts for cordial waters. These have not been discussed in here as they have already been reviewed in the Food and Spices chapter. That said, one main point to be noted is that when these cordial waters, such as cinnamon water, Aqua Coelestis, Dr. Steuens water, Angelica water or saffron water, etc., were made, they were not just for drinking but also to imbibe the aroma of spices.

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<sup>882</sup> Shelmerdine, (1985), p15

<sup>883</sup> Thurlkill (2016)

<sup>884</sup> Sell, (2006a, 2006b)

<sup>885</sup> Dugan, (2011)



Markham in the early seventeenth century advised that every housewife “*Therefore first I would haue her furnish her selfe of very good Stils, for the distulation of all kinds of Waters*”. The process was simple; flower petals, spices, and other aromatic substances are soaked in water and placed in the still. The water absorbs the oils from the flowers and spices, then is heated. The steam emanating is then passed via a condenser, which separates the oil from the water. The oil is the essential oil, whilst the water (which is still flavoured or has some remnants of the aromatic substances) is more subtle and is known as hydrosol.<sup>886</sup> A receipt was titled “King Henry the Eighth his perfume” and was made of rose water with grains of musk, ambergris, civet, and cloves.<sup>887</sup> Before we go deeper into the receipt books, it should be noted that Henry VIII’s push of Tudor power was helped by him pushing for rose perfume. This royal sponsorship of perfumes also helped to popularise the use of perfumes across the nation.<sup>888</sup>

Fumigations were used for a variety of medicinal purposes; for example, Ambrose Pare suggests fixing of strangulated and dropped wombs by applying a perfumed pessary or fumigation. The suggestions include significant use of spices amongst other rather interesting substances.

“There may be a fumigation of Spices to be received up into the wombe, . . . the matter and ingredients of sweet and aromattick fumigations, are Cinamon, Calam., Aromat.Lig.Aloes, Ladanum, Benzoin, Thyme, Pepper, Cloves, Lavender, Calamint, Mugwort, Penni- royal, Alepta moschat, Nutmegs, Musk, Amber, Squinant, and such like, which for their sweet smell and sympathy, allure or intice the womb downwards, by their heat consume and digest the thick vapours and putrefied ill juice. Contrawise, let the nostrils be perfumed with fetid and rank smells, and let there be made Gum. Galbanum, sapenum, ammoniacum, assafaetida, bitumen, oil of Jeat, snuff of a Tallow-candle when it is blown out, with the fumes of Birds Feathers, especially of Partrides or Woodcocks, of Mans hair, or Goats hair, of old Leather, of Hose- hoofs, and such like things burned. Another Pare recipe for unmarried women: “Let the Midwife anoint her fingers with oleum nardinum, or moschetalinum, or of Cloves, or else of Spike mixed with Musk, Ambergreece, Civet, and other sweet powders, and with these let her rub and tickle the top of the neck of the womb which toucheth the inner orifice . . .for so at length the venomous matter contained in the womb, shall be dissolved and flow out, and the malign, sharp, and flatulent vapours, whereby the womb is driven as it were into a fury or rage, shall be dissolved and dissipated.”<sup>889</sup>

An anonymous work published in 1696, called *The Whole Duty of a Woman or a Guide to the Female Sex From the Age of Sixteen to Sixty, &c* gives several recipes for perfumes that include spices in Chapter V. In Chapter XI, a perfume to drive away vermin contains cloves; a curious perfume against ill scents includes frankincense, myrrh, lavender, and rosemary; a sweet bag to scent clothes includes rosemary, lavender, hyssop, herbs, and saffron; a sweet ball to carry in one’s hand for the prevention of ill airs or scents includes oil of cloves, nutmeg, or cinnamon. Apoplectic Water includes cloves, mace, and saffron which are supposed to help with apoplexy and distemper proceeding from the affliction of the brain. In Chapter XI, actual perfume recipes are given, such as a curious perfume against ill scents, which include frankincense, myrrh, lavender, and rosemary;

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<sup>886</sup> Markham, (1615), p142

<sup>887</sup> Plat, (1602)

<sup>888</sup> Dugan, (2011), p23-38

<sup>889</sup> Paré, (1634), p944, p946

*“sweet balls to carry in one’s hand for the prevention of ill airs or scents” include oil of cloves, nutmeg, and cinnamon.*<sup>890</sup> Plat provides several recipes for delicate perfumes that contain spices in section d.<sup>891</sup> He also explains how to perfume gloves, which will be further explored in the next section. Another 1603 receipt book goes into details of how distillation happens to various substances such as spirits of spices, aqua rubea, aqua composita, cinnamon water, etc., which would either be sprinkled directly on the body or clothes or form part of medicines or perfumes.<sup>892</sup>

The *Pharmacopoeia Londinensis* (PL) has many recipes for syrups that are perfumed with spices, such as on page 111, where syrups are recommended to be perfumed with cinnamon and spikenard; page 113, where citron syrup is perfumed with musk; syrup of quinces perfumed with cinnamon, cloves, and ginger in page 114, etc.<sup>893</sup> A book for servant maids suggests a recipe with rosemary to clean, perfume, and preserve hair.<sup>894</sup> Wolley provides a recipe for perfumed roses where damask rose buds have been steeped in rose or orange flower water, which includes cloves. Wolley also gives recipes for perfumes such as the King's Perfume and the Queen's Perfume which states, *“Take four spoonfuls of spike water, and four spoonfuls of Damask water, thirty cloves, and eight bay leaves; shred as much sugar as weigheth two pence; all these boiled make a good perfume”*.<sup>895</sup> A sweet water recipe for the hands to clean, whiten and presumably perfume the hands includes oil of cloves, mace, and nutmeg.<sup>896</sup>

FIGURE 135 - CASTING BOTTLE FIFTEENTH CENTURY ENGLAND



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<sup>890</sup> Anonymous, (1696)

<sup>891</sup> Plat (1602), E5

<sup>892</sup> Anonymous, (1603)

<sup>893</sup> Anonymous, (1618)

<sup>894</sup> Anonymous, (1677)

<sup>895</sup> Woolley, (1670), p28-9, 34, 55

<sup>896</sup> Anonymous, (1675), p199

This object in Figure 135 is a casting bottle that dates to 1540-50 which has also been referred to in the Food & Spices chapter. It was made in Egypt in the ninth century and mounted in England in the mid-sixteenth century.<sup>897</sup>

FIGURE 136 - USE OF CASTING BOTTLES – c1830, c1580



These casting bottles were designed to be either hung around their necks or on their waists as can be seen in the Figure 136 above in the painting of Princess Mary Tudor (1516-1558).<sup>898</sup> On the left or in the right painting of a Noblewoman by Lavina Fontana, 1580,<sup>899</sup> where the casting bottle is hung from the central waist chain. As Dugan states, these bottles were extremely popular as fashionable gifts during the early part of the early modern English period, and with perfume, they started to become very explicitly linked to sex. She mentions Shakespeare's sonnets and other literary efforts that talk about how men are to provide aromatic gifts such as perfumes in casting bottles, perfumed gloves, perfumed face masks, etc.<sup>900</sup>

Soden-Smith describes the following formula to make a pomander dating from 1584: *"Benzoin resin, calamite, labdanum, and storax balsam were ground into a powder, dissolved in rose water, and put into a pan over a fire to cook together. The cooked mixture was then removed from the fire, rolled into an apple shape, and coated with a powdered mixture of cinnamon, sweet sanders, and cloves. After this, a concoction was made from three grains each of ambergris, deer musk, and civet musk. The ambergris was dissolved first, and the deer and civet musk mixed in later. The "apple" ball was rolled through the musk concoction to blend these ingredients and then*

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<sup>897</sup> Anonymous, (1540-1550)

<sup>898</sup> Anonymous, (c1830).

<sup>899</sup> Fontana, (c1580)

<sup>900</sup> Dugan, (2011), p42-69

*kneaded to combine and moulded back into the shape of an apple*".<sup>901</sup>

FIGURE 137 - TYPES OF POMANDERS - 1588



Soden-Smith's article is replete with examples of the use of spices in a variety of ways and the use of pomanders. Lavender and cinnamon are usually commonly used in pomanders. He mentions that Cardinal Wolsey used oranges whose pips had been replaced with spices and perfumes to sniff whilst passing amongst crowds; he was also known to sniff a nutmeg mounted in silver. In Figure 155, he gives some common examples of the pomander units he has seen and evidenced. An example of the pomander shown in Figure 137 in the illustration is shown in real life in Figure 138 below. *The Widowes Treasure Book* of 1588 suggests a different recipe for a pomander

<sup>901</sup> Soden-Smith, (1874), p337-343

and includes cloves.<sup>902</sup> Pomanders came in various shapes and sizes, as can be seen in some of the examples at The Victoria and Albert Museum. The one shown in Figure 156 is of gilded silver and was made in England around 1600-1610. This one would allow the segments to open, and different aromatic substances, such as spices, musk, civet, flowers, etc., would be inserted into each segment.

FIGURE 138 - GILDED SILVER POMANDERS, V&A MUSEUM 1600-1610



FIGURE 139 - WOODEN POMANDER, MARY ROSE SHIP, 1545



All pomanders were not expensive; cheaper pomanders made of wood were made like the one shown in Figure 139 for people who were lower in the socio-economic order. It was made of boxwood, attached to a leather scabbard via a plaited silk cord, and said to be owned by an archer on the Mary Rose Ship, which sank off Portsmouth in 1545.

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<sup>902</sup> Anonymous, (1588)



FIGURE 140 - EMBROIDERED BAGS FOR POMANDERS, V&A MUSEUM 1600-1650



Aromatic substances were also put inside highly embroidered and decorated bags such as shown in the two examples in Figure 140.<sup>903</sup> These bags are a very rare specimen dating 1600-1650 when they were made with linen, silk, silver thread, hand sewn and embroidered.

Sell mentions how Charles Lilly, a London perfumer, introduced scented snuffs and a fragrance consisting of orange, musk, civet, violets, and amber, while in 1711, William Bayley, Juan Floris, and William Yardley opened more shops in London. Perfumes and the reaction against them became so intense that George III (1738-1820) issued the following edict: *"All women, whether of rank or professional degree, whether virgins, maids, or widows, that shall from this after act impose upon, seduce, and betray into matrimony any of his majesty's subjects by the use of scents, potions, or cosmetics"* Sell explains how the changes in society with movement away from rural areas into congested urban areas with prisons, hospitals, ships, churches, etc., became very odorous with rivers receiving sewer discharge and industry starting to belch out foul-smelling smoke. Dyers, tanners, butchers, and others, lacking proper waste disposal, added to the problem compounded by the lack of sanitary systems at home and in the neighbourhood. Sell also points out how the advances in chemistry and chemical engineering meant that chemists and perfumers were now able to determine and extricate pure chemicals that were able to replicate scents and produce combinations that had previously only been able to be procured using natural substances such as spices. This led to the reduction of the use of spices in perfumes.<sup>904</sup> In terms of material culture, perfumes and pomanders include an element of luxury.<sup>905</sup> These are luxury items-not just for personal gratification but also to showcase sweet smells at a time when the general environment was not so pleasant smelling with smoke, bad sanitation, bad ventilation, and the presence of smelly

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<sup>903</sup> Anonymous, (1600-1650)

<sup>904</sup> Sell, (2006)

<sup>905</sup> Berg (2007)

animals. So, to distinguish themselves from the common man or to showcase luxury – spices played a large part, including the objects that stored these spices for perfumery purposes.

## 4.11. Spices in Fashion and Clothing

Spices have been used in fashion and clothing for many centuries for their colourant and aromatic qualities. For example, use of saffron to dye clothes has been known since ancient times.<sup>906</sup> In 1537, an English act was passed to forbid anybody in Ireland to dress their hair in the Irish fashion or dye with saffron, etc.<sup>907</sup> Saffron and turmeric were used extensively to dye, especially in the form of yellow starch in the early modern England period.<sup>908</sup> After this period, cheaper and better chemicals were invented to use for dyeing purposes, and that led to the decline of using spices for dyeing.<sup>909</sup>

FIGURE 141 - PERFUMED EMBROIDERED GLOVES, 1600-1625, 1566



The tradition of perfuming gloves and clothing is debated by fashion historians, and there are disputes over whether it was Catherine de Medici or Elizabeth I who popularised this trend. Catherine de Medici brought her personal perfumer to France when she married Henry of Orleans. Her perfumer, Renato Bianco, then opened a shop in Paris and sold perfumes, cosmetics, and poisons in the mid-sixteenth century.<sup>910</sup> This fashion became widespread across Europe and in England, not least since Elizabeth I was a very popular user of these aromatic gloves, cloaks, and

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<sup>906</sup> Basker, D., Negbi, M. (1983)

<sup>907</sup> Flavin, Susan. (2011)

<sup>908</sup> Jones, A R and Stallybrass, P. (2000)

<sup>909</sup> Fairlie, Susan. (1965)

<sup>910</sup> Digby, (1963), p26; Nevinson, John, (1950)



other items of apparel.<sup>911</sup> The above two examples of period gloves in Figure 141 are respectively from the V&A Museum in London, belonging to an unidentified lady dating to 1600-1625, and the Ashmolean Museum in Oxford, which belonged to Elizabeth I, dating to 1566, belong to this genre.

Dugan mentions how the first perfumed gloves were presented to Queen Elizabeth I by Sir Edward of Navarre, Earl of Oxford, in 1566, who had purchased them in Italy. This became very popular in court and inspired a trend for gloves scented with the Earl of Oxford's perfume. Dugan articulates how popular these gloves were across nobility and the rich.<sup>912</sup> Hull explains how they were referred to by Shakespeare and they had become an article of trade not only in shops but also by hawkers and peddlers. Which means that the ordinary man on the street could afford them. He lists out how King James 1 (1605-6) received perfumed gloves from William Huggins and his musicians and how three Italians presented a pair of sweet gloves to Elizabeth I.<sup>913</sup>

FIGURE 142 - GEORGE CLIFFORD, WITH A SPICED GLOVE ON HIS HAT - 1590



The Queen frequently bestowed her favourite perfumed gloves as a mark of recognition and reward for good service. Figure 142 is a painting of George Clifford, 3rd Earl of Cumberland, 1590, by Nicholas Hillard. The glove, which is shown on his hat, was gifted to him by Queen Elizabeth

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<sup>911</sup> Garner, Shirley Nelson, (1990)

<sup>912</sup> Dugan H, (2011), p132

<sup>913</sup> Hull, William, (1834)

I in recognition of his services in defeating the Spanish Armada.<sup>914</sup> Dugan further explains the complex industrial mechanism, with treated leather from Spain, and perfumes from Italy were sewn in England. Then the manufacturer moved to London, undergoing a complex and lengthy process with tanners, skimmers, cutters, dresser, embroiderers, grocers, apothecaries, and merchants in the long value chain.<sup>915</sup>

A recipe to produce an oil to perfume gloves is given by Wolley “*An Oyl perfume for gloves that shall never out. Take Benjamin two ounces, storax and calamint each an ounce put the two first must be finely beaten by themselves; then take a pound of sweet almonds, and mingle it with the storax and Benjamin upon a marble stone, and then put it into an earthen pot with more Oyl, then put in your gloves powdered, and so let it stand very close covered; and when you will perfume a pair of gloves, take a little fair water in a spoon, and wipe your gloves very fine with; take another spoon, and dip it in your Oyl, and rub it on your gloves, and let them dry this is excellent*”.<sup>916</sup> The book, *Accomplished Ladies Rich Closet of Rarities* dating to 1690, gives another similar recipe that contains spices, “*Take of storax and calamint, each one ounce, of Benjamin two ounces...add an ounce of cinnamon-water...gently anoint them with the perfume, and it will smell beyond expectation*”.<sup>917</sup> Another recipe for glove perfume is given by Plat where he explains how to make oil (spiced or scented, or both).<sup>918</sup>

Queen Elizabeth I did not just wear perfumed gloves; she also wore perfumed cloaks made of leather, as her wardrobe inventory of 1600 shows.<sup>919</sup> Piesse provides an estimate of the cost of the cloak, stating that the Bond Street Perfumers of London were selling pieces of “*peau d’Espange*” at the rate of one shilling per square inch. He also notes that even her shoes were perfumed.<sup>920</sup> This is corroborated by Nares, who adds to the story of the Earl of Oxford that he also brought a perfumed leather jerkin and that pockets were also perfumed. He also mentions that boots were also perfumed.<sup>921</sup> Unfortunately, no further details or images were able to be gleaned on how these cloaks were made or what they looked like. Mrs Hughes provides several translated recipes for Spanish perfumed gloves, perfumes and fifteen recipes for perfuming gloves.<sup>922</sup> John Partridge, in his 1573 book, gives seven recipes for perfuming gloves, some of which contain spices such as cinnamon and cloves. He also gives recipes that contain spices for preserving clothes such as woollens and linens.<sup>923</sup>

More detail around her reign and perfumed pieces of apparel are given by Aikin. Due to her extensive love for perfumed apparel, her ministers were worried that her enemies would try to poison her and discussed this as noted in the minutes of her council: “*Item. That no manner of perfume, either in apparel or sleeves, gloves, or suchlike, or otherwise that shall be appointed for your majesty's savor, be presented by any stranger or other person, but that the same be corrected by some other fume.*” She even had her napkins perfumed.<sup>924</sup> This is not to say that such designs and

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<sup>914</sup> Hillard, Nicholas. (c1590)

<sup>915</sup> Dugan H, (2011), p146-151

<sup>916</sup> Wolley, (1670), p34

<sup>917</sup> Anonymous, (1690)

<sup>918</sup> Plat, (1602), p34

<sup>919</sup> Nichols, John, (1788), V3, p509

<sup>920</sup> Piesse, Septimus, (1867), p30

<sup>921</sup> Nares, Robert. (1822), p384

<sup>922</sup> Hughes, (1637)

<sup>923</sup> Partridge, John. (1573)

<sup>924</sup> Aikin, Lucy, (1900), p187, 345

apparel were only for the royalty. Dugan talks about how perfumers were present in Westminster. She states that six perfumers, eleven leather dressers, three distillers of strong waters, and one seller of sweet powders were present in the records of 1627, 1635, and 1639.

The cookbook recipes and receipt books were a way for housewives and women further away from London to make up their own recipes and to have the height of fashion at a much lower cost by distilling and making up their own waters, oils, and perfumes. Barbe states that the book is directed towards people of quality and condition who can gather flowers and use them to make perfumes whilst saving the cost of extravagant perfume in luxury shops.<sup>925</sup> *The Worshipful Company of Glovers* was originally called the Cordwainers but separated to form their own organisation in 1349 and then received a royal charter of incorporation in 1639. They formally present a pair of gloves to the British Sovereign with gloves on his/her coronation.<sup>926</sup> Perfumed apparel recipes do not appear in any post-1700 cookbooks and receipt books reviewed in both Chapter 3 and 4. Some references to perfumed handkerchiefs continue in literature, but the idea of having perfumed gloves, cloaks, shoes, and the like was a fashion that simply died out with the passage of time. Which obviously meant that another demand for spices reduced if not vanished.

## 4.12. Conclusion

This focus on diet as medicine had one major drawback: it assumed that the family and individuals had sufficient financial wherewithal to choose their diet. For most of the English population, there was no real choice. William Black, a physician, wrote in 1782 that: *“To read over some specious systems of diet, one could only conclude that they were written for those who had a coach and six at their doors and a French cook at their kitchens”*.<sup>927</sup> In other words, most of the medical and dietary advice in the early modern period was aimed at the rich, aristocracy, and royalty who had the economic means to indulge in dietary options. For the common population, the emphasis was more on curative medicine, based on chemicals, addressing illnesses and diseases rather than overall health. As people moved away from seeing food as medicine, from the early nineteenth century onwards, food became more orientated towards flavours rather than medicine. The previous chapter identified how French cooking predominated with its light and delicate flavourings, and spices fell out of favour. Similarly, with the rise in chemically based medicine, better understanding of the causes of diseases and sicknesses, the driver of having hot and dry spices to cure illnesses in cold, wet England became progressively weaker.

A chemist's prescription notebook, written by Cornelius Fletcher (although there are different handwriting styles in the manuscript) in 1827, shows how spice usage and Galenic Theory were diminishing. Fletcher was based in Nottinghamshire and collected medical, veterinary, and household recipes and notes. There are minimal recipes containing spices such as mustard and fenugreek. The last quarter of the book includes prescriptions for named individuals, which is perhaps a form of record keeping.<sup>928</sup> A later chemist's book, dating to 1860, shows that spice usage in medicine had dramatically reduced, even though it still existed in cooking recipes, such as fish sauce, chutney paste, and perfume recipes. Wilcox listed medical, dental, culinary, perfume, and

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<sup>925</sup> Barbe, Simon, (1696), A2 v

<sup>926</sup> Anonymous, (2020)

<sup>927</sup> Black, W. (1782), p225

<sup>928</sup> Anonymous, (1827)

toiletary recipes, including how to make coloured bottles. An eclectic collection of recipes indeed, but it clearly shows that spice usage in medicine had significantly reduced by 1860.<sup>929</sup>

FIGURE 143 - JOHN SIMMONDS APOTHECARY, 1842, ENGRAVING



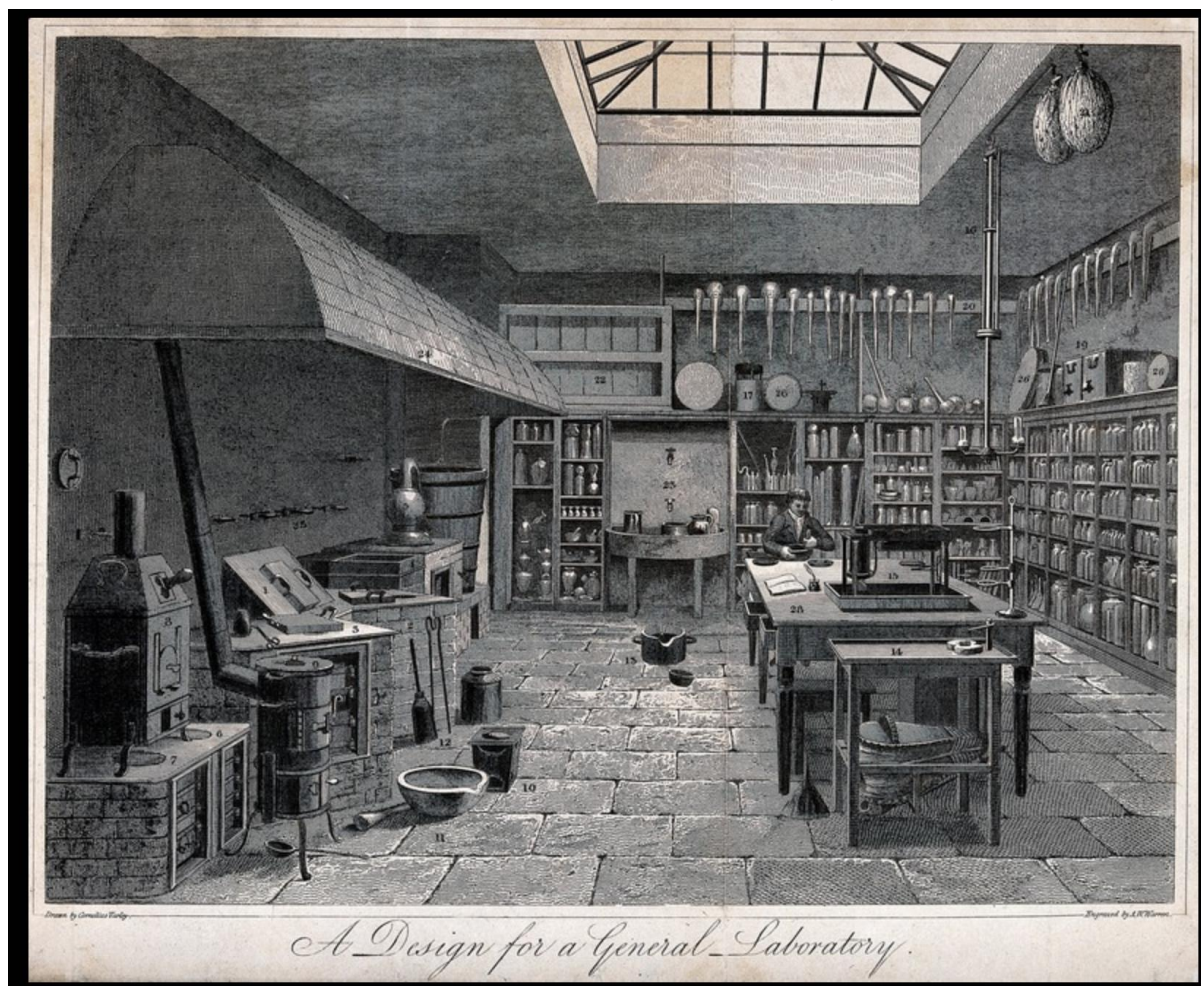
Figure 143 is an engraving print, dating to 1842, showing an apothecary, John Simmonds, and his boy apprentice, William, working in John Bell's pharmacy laboratory.<sup>930</sup> The pharmacy was in London's Oxford Street and founded in 1798. The business had its own laboratory to manufacture drugs (one can see the distillation apparatus on the left, various glass canisters on the shelves, and other manufacturing equipment), as Bell was dissatisfied with the general quality available in the market. It is noticeable that scientific equipment now predominates rather than the basic mortar, pestle, bones, and manuscripts that were seen in apothecary visualisations of earlier times.

<sup>929</sup> Wilcox, H. (1860)

<sup>930</sup> Hunt, William, et. al, (1842)



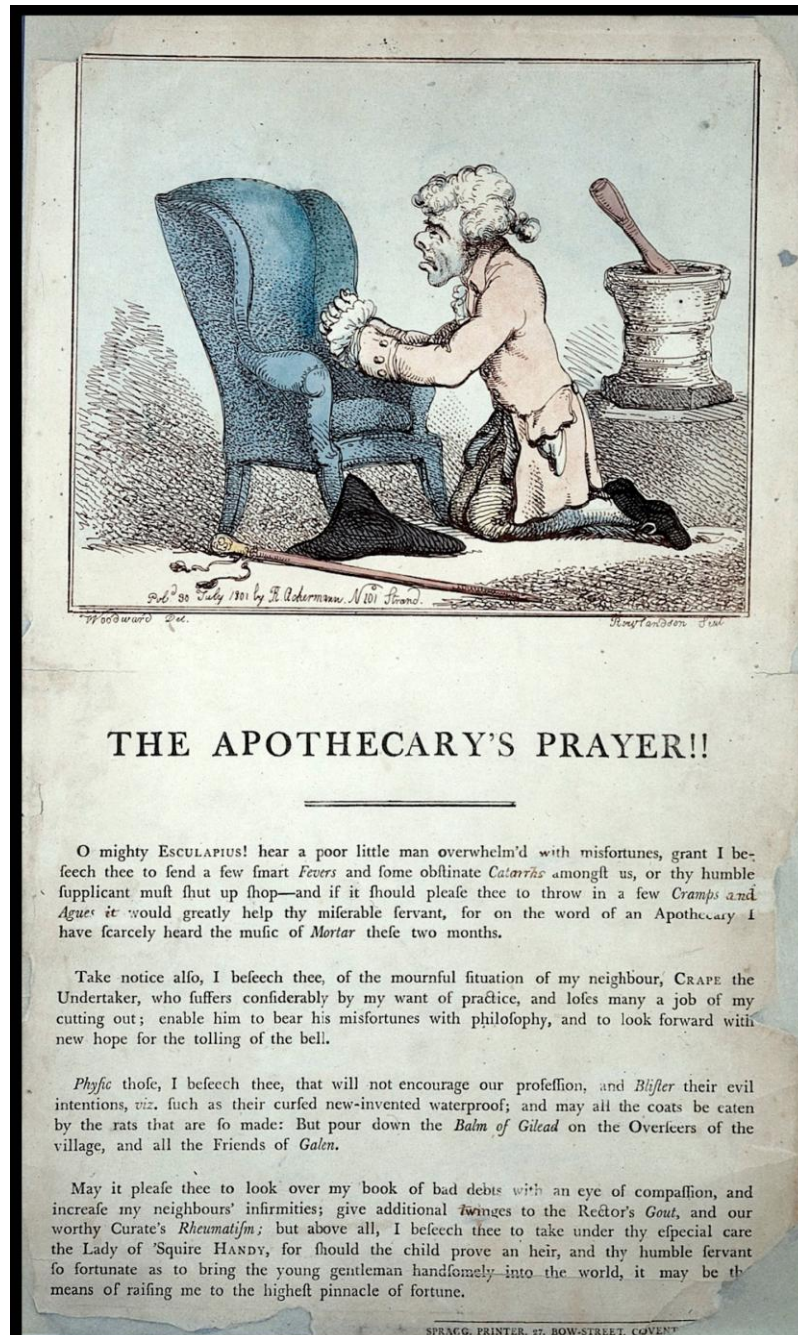
FIGURE 144 - LABORATORY DESIGN, 1822



Highly specialised general laboratory designs were circulated, as the above etching shows in Figure 144. Dating to 1822 by A. W. Warren, it shows how a general chemical laboratory should be laid out and constructed (apparatuses are numbered).<sup>931</sup> Such a level of formality, precision, and specialisation indicates this is now very distinctive, rather than the haphazard arrangement of previous apothecary shops, and that now drugs are produced in laboratories with a scientific perspective.

<sup>931</sup> Warren, A W, (1822)

FIGURE 145 - THE APOTHECARY'S PRAYER, WOODWARD, 1801



A coloured etching by Woodward in 1801, shown in Figure 145, talks about the 'Apothecary Prayer,' wishing for a host of illnesses to descend on his customers so he can make more money. Note that he is praying for medical conditions such as ague, catarrh, cramps, infertility, and impotence, all of which require expensive ingredients such as spices (as discussed earlier in the chapter). People are becoming healthier and no longer needing the services of apothecaries preparing specific medicines. The apothecary complains that he has not heard the music of the mortar and pestle for over two months.<sup>932</sup> This clearly indicates that the Galenic age has passed. Moreover, other medical discoveries ensured that the concept of treating diseases became more

<sup>932</sup> Woodward, George Moutard, (1801)

scientific. Some of the major relevant milestones in the eighteenth and nineteenth centuries were Lavoisier's respiration in 1784, smallpox vaccination in 1798, the invention of the stethoscope in 1816, blood transfusions in 1829, and general anaesthesia in 1842, among others that helped demystify human health. 1862 saw the beginning of the germ theory of disease; antiseptics were developed in 1865, and later, in 1892, viruses were discovered.<sup>933</sup> These fundamental discoveries ensured that using food as medicine to balance/manage humours was no longer supported. It was simply not possible to argue for the old Galenic concepts in the face of the scientific method and modern medical discoveries, leading to spices not being used in the culinary field as medicines. Similarly, the use of spices in magic, fashion, perfumes all gradually dropped away as artificial compounds were invented which were easier and cheaper to produce and use.

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<sup>933</sup> Pickover, Clifford, (2012)



## 5. Conclusion

This chapter concludes the dissertation. It reviews the answers to the research hypothesis, summarises the overall methodology as well as individual chapter methodologies, and explores the significance and implications of the findings along with contributions. It finally ends with an elucidation of the limitations of the study and some suggestions for further research.

### 5.1. The Research Hypothesis and summary findings

The primary research hypothesis as noted in Chapter 1: Introduction was.

How did English culture respond to the positive spice supply shock at the beginning of the early modern period, with the rise of East India Company spice imports, and why did the demand for spices drop by the end of the period?

The primary focus was to prove that spices were used extensively across a variety of human activities and then to show how the usage dropped off. The dimensions used to exhibit this behaviour relate to the economic history of spices, the food history of spices, the medical history of spices, and finally the use of spices in relatively minor uses such as religion, magic, perfumes, fashion, financial assets, crime, art, etc.

The economic history results clearly indicate that the early modern period in England saw an extraordinary rise in the supply and consumption of spices across the country, as evidenced by the import data, East India Company Data, price data, probate records, etc., and then the value, as well as the volume of spices being imported into the country, reduced towards the end of the period. The spices and food history results show that food, albeit of the higher socio-economic strata, has been frequently highly spiced, and then this spicy flavouring started to fall away as we reach the end of the period. In terms of medicine, spices (and herbs) were used extensively in pharmacopoeia by surgeons, physicians, apothecaries, and in-home medicine (as authored frequently by the same authors who wrote the cookbooks or receipt books). The usage of spices in medicine started to fall off in the nineteenth century as more medical knowledge of bacteria, blood circulation, immunisation, clinical medicine etc., improved.

Spices were used in perfumes and aromatics for millennia and are still used, although their use has reduced as artificial aromas started to get developed due to better understanding of chemical reactions and distillation processes in the nineteenth century onwards. Fashion saw the use of spices in perfumed clothes, especially in the Elizabethan period, but their use and attraction diminished as time went on. Spices as financial assets were very attractive because bullion was rare; they were high value, small in physical dimensions, easily transportable and hidden, fungible and easily recognisable. So they were, in many cases, used in place of bullion. As time went on, and the introduction of paper currency and change became far more prevalent, the use of spices as financial assets diminished. On a related matter, spices as objects of crime, for the same reasons that they were good bullion replacements, were quite high at the beginning of the early modern period and

then diminished towards the end of the period due to improvements in security, reduction in price, and general changes in simple availability of spices in homes and travellers.

## 5.2. The Methodology

The research hypothesis was tested by using methodological guidance from history, literature, anthropology, economics, art history, and food choice theory, which is adapted for the use of spices in the early modern period. The below-mentioned model was used to guide the research to answer the research hypothesis.

The historical/geographical/climatic antecedents and factors were explored based on the spices, its geographic footprint, varieties of spice, etc., using secondary sources of these spices, which provided a general background on the historical and environmental factors for them. A rather broader perspective was taken to show how spices were used from the Roman era onwards to set the background of spice usage in early modern England. As can be seen, it was clear that spices were used extensively from Roman times to Mediaeval England, and this continued and increased in the early part of early modern England. The pre-EIC spice trade in England was investigated, although actual quantitative data is sparse.

In-Country Spice Production focused on exploring the production values in the country of origin where data was available in India and Southeast Asia primarily. Spice pricing and markups were considered next, as this has a two-way impact on the spice supply. Pricing and markups during the long supply chain from inland India or the Spice Islands. Data from the East India Company, port data etc., were used as primary sources. Pepper data from KN Chaudhuri's magisterial work on the East India Company was used to undertake much further analysis. The data clearly showed how pepper, as a component of total imports, kept falling regularly over the early modern period. Of course, we cannot say this was due to pepper demand reduction; there were other imports that were higher value and newer. The data also showed that the EIC was selling more pepper in England than it was loading itself from its Asian holdings, which indicated that it was importing pepper from the Continent. The East India Company Accountant General Journals were reviewed to elicit raw data for other spices following the methodology given by KN Chaudhuri, but there were too many data issues to undertake the same analysis. Another dataset from Huw Bowen was used for a higher level of analysis of EIC trade, as there was no breakdown of data relating to pepper.

Customs and port data were accessed from the National Archives, and that data was more promising across spices. There are no customs ledgers prior to 1696, and data was available only till 1780. The analysis showed significant issues with how customs duty was levied and how records were maintained during that time. Corruption amongst port officials was extant, and that also causes issues with the veracity of the data. The lack of data before 1696 and after 1780 meant that one cannot compare with other datasets such as the KN Chaudhuri or Huw Bowen datasets, but some general outline conclusions can be drawn given the availability of individual spice data, especially imports. Cardamom showed a clear increasing trend line, whilst cinnamon, long pepper, standard pepper, turmeric, nutmeg & cloves showed a variable view with, starting from a low point, then rising and then falling. Nutmeg showed a rather interesting, very large spike towards the end. This could be because around the end of this period, the use of nutmeg graters as common pocket inventory shot up, as was evidenced in the food chapter. Ginger started from a high point and then fell off dramatically.

The issues around storage in warehouses, theft, leakage and pilferage, congestion at the London Pool, etc. were considered, as these factors will have an impact on the import capability, storage prices, sale prices, and profits. Besides this, the data around re-exports were also explored, as this will reduce the number of spices being consumed domestically. The domestic supply chain was then traced out from London (where most of the spices were landed, stored, and sold on a wholesale basis) into the rest of England. How non-Londoners would order spices from London or locally and how the delivery would happen. The regional markets were explored, such as the smaller market towns in England. Probate and inventory records of provincial grocers were explored to show the level of inventory of spices.

The demand and consumption in England based on purchases were then traced based on household records and records maintained by various parties, thankfully collated by Rogers in his magisterial work *A History of Agriculture and Prices in England From the Year after the Oxford Parliament* (1259) to the commencement of the Continental War (1793). The data clearly showed the pattern expected the use of spices rose towards the end of the early modern period and then declined. Analysis of the volatility (both high volatility and flat price series cases) and the difficulty of having standardised weights and prices over such a long period was also undertaken. William Beveridge extended the data, which was then further extended by Gregory Clark. They used data from Westminster School, Lord Steward's Department, and the Navy Victualling Department. This entire dataset was then decomposed into individual data series relating to individual spices, plotted, and then polynomial trend lines fitted to the graphs. Wages of farmworkers, craftsmen, and building labourers were determined and plotted to match the period of study, along with the cost of spices. Both graphical and correlation exercises were undertaken, which indicates some rather interesting relationships, such as links between saffron and coffee, mustard and raisins, sugar, and mustard, etc. There was a high correlation between farmworker wages and commodity prices.

The price formation process, characteristics, dimensions, and other details were discussed for the competitor prices, EIC purchase price, the Overseas Transportation and Warehousing Price, the Landed Price (in London), the Taxed or Customs Value/Price, the Auction Price, the Private Cargo Price, the Overseas Import Price and Substitution Price, the London Wholesaler Price, the Regional Wholesales Price, and the Retail Price. Each of these is different prices with different factors driving the price formation process. They are, of course, connected with each other, but due to the lack of consistent supply chain value data, it was not able to undertake any further detailed analysis. The above handled the first eight factors in the Food Model.

The ninth factor to be explored was spice usage, where the usage of spices in a variety of cultural aspects such as food, medicine, fashion, financial assets, art, magic, and religion was explored mainly through primary research using cookbooks, pharmacopoeia, financial records, and painting galleries, and secondary sources such as library reference materials, reports, PhD dissertations, and books.

For the food chapter, as food patterns, consumption, and usage change slowly and usually have long antecedents, the methodology was to explore how spices were used prior to the early modern period to establish the baseline, including the first cookbook in English-*Forme of Cury*, written by the chief master cooks of King Richard II in 1390 AD. Then cookbooks or recipe books were analysed by year of publication to see the usage of spices in the household and how the rationale for publishing the books emerged and changed. More than 100 early modern cookbooks were analysed over this period. In depth textual and basic graphical analysis to see how spice usage differed at roughly 50-year intervals was carried out till about 1800.

Then food-related art and craft in the early modern period was explored. This included glass windows, woodcuts, paintings, engravings, printed pamphlets, furniture, spice cupboards, jars and ceramics, etchings, casting bottles, spice dishes, spice boxes, cutlery sets, condiment sets, ginger jars, spice mills, nutmeg graters, posset cups, etc. to show the wide variety of human cultural artefacts that reflected spices and spice-related human activity. Literature in the form of poems, books, songs, diaries, etc., was then investigated to find out how spices were mentioned or referred to. Works from Harington, Shakespeare, Massinger, Wither, Pepys, Fielding, Hartlib, Ellis, Austen, Dickens etc., were evaluated and analysed. Finally, using Waterloo as a convenient end of the period, some conclusions were drawn on how early modern English Society carried on using more and more spices from the mediaeval period and then as the French influence and other factors impacted, the use of spices in food started dropping off.

The next area of the use of spices to be explored was in the medicinal area. The early modern cookbooks also contained household medical remedies for common ailments. The cookbooks reviewed in the earlier chapter were also scanned to see if any medical recipes included spices. The earlier cookbooks did contain recipes with spices for ailments such as the bite of mad dogs, plagues, gout, asthma, etc., but the later cookbooks stopped containing medical recipes as the field became more and more specialised. Spices in veterinary use were also explored but failed to find much evidence. Medical books, the London pharmacopoeia and other related books by physicians were then analysed. A similar pattern can be observed with spices being used in the early part of the period and then reducing as we go on, as newer and better medical knowledge is developed. Use of spices by the apothecaries, who mixed and were the retail end of the medicinal trade, was then investigated by reviewing records; the actual apothecary jars where these medicines would be kept were analysed, along with their representations in art, their tools, which they used to mix their potions (including spices). A thematic analysis was also carried out for two medicines for poisons and for impotence down the ages. Both these medical conditions were noted from antiquity to be dosed with medicines with spices. The tracing of these cures allowed the analysis to show that spices were used for millennia till recent times. Finally, some of the modern-day scientific developments in medicine, biology, pharmaceuticals, antibiotics, etc. were traced, which caused the Galenic humoral theory to be discredited and the use of spices in medicine to reduce and disappear.

The last area is related to other smaller areas of cultural and social life in early modern England such as in religion, magic, perfumes, fashion and clothing, in financial assets and how they were represented in advertisements. Use of spices in Judaism and then Christian religious rituals were analysed, such as embalming, holy oil, food, and fasting. Magical charms, spells, and other related magical artefacts were looked at from the perspective of spices. The manufacture of perfumes, which relied significantly on spices, was traced from ancient times to the use of spices in anti-plague remedies to fumigation and other uses were explored. Casting bottles, pomanders, and perfume bags were investigated. The use of spices in fashion and clothing, such as perfumed gloves and cloaks, was explored, as were spices as financial assets as rental equivalents and savings. The last and 10th factor, spice-related behaviour was also explored mainly in the crime area by using the Old Bailey and British Newspaper Archive primary source material. Each major spice was the search term for the period to see the identified records. The analysis showed that crimes related to these spices were high during the early part of the Modern England period but then reduced gradually till all references to crimes relating to spices disappeared. The final area to be analysed was to check how spices were reflected in advertisements and newspaper articles. A decade interval analysis of

the frequency of the term “spice” showed that the spices were sold in greater frequency than before.

### **5.3. The significance & limitations of the findings**

The research clearly showed that the use of spices was quite substantial in the beginning of the early modern period in the sixteenth century across the various cultural & economic factors. As we progress through the decades and centuries towards the end of the period around the beginning of the nineteenth century, the use of spices drops substantially. As noted in the introduction chapter, the traditional view of British culture being bland and not spicy in the twentieth century is certainly not what was the case just two centuries back, where food, medicines, magic, religion, clothes, art and literature, and financial transactions were replete with use and mention of spices. As of now, spices are again being used in food, medicine, and other uses. It seems like the nineteenth century of no spices was more an aberration in British history.

The tracing of the spice route and economic analysis of spices indicated fascinating insights into the pricing, markups, storage, re-exports, etc. of spices. The tracing of spices from where they were grown to how they landed up in the kitchen up and down the country, how they were stored, used, and cooked, indicated that use was widespread. For many decades, everyone who had pockets would usually have a nutmeg grater handy and would grate the nutmeg over drinks and food during social gatherings. When compared to the average wages, it showed that spice usage was widespread despite the expense. Obviously, the usage was focused on the higher socio-economic sections of society.

Food used to be highly spiced (as in different spices being used in robust quantities) and was available in sufficient quantities and spread across the country so that even household receipt books and common cookbooks referred to them. The rise in literacy, the industrial revolution, the rise of the middle class, and the establishment of smaller family households meant that there was a demand for cookbooks. These cookbooks would give guidance to housewives on almost everything, ranging from food to servants, medicine to looking after animals. This spread the use of spices even wider and deeper into society.

Prior to the inventions and discoveries in the biological and medical fields from the nineteenth century onwards, medicines were frequently and widely prescribed based on the ancient Galenic Humoral Theory. This theory travelled from Galen and Hippocrates in Ancient Greece to Avicenna in the Middle East and then back via Italy, Germany, and France, and to England via the universities, medical books, and medical schools. Spices being considered as hot and dry meant that in a cold and wet country like England, they were frequently included in many medicines ranging from gout to asthma to impotence or anti-poison. It was not only the physicians but also the apothecaries who would keep spices front and centre in the patients’ minds by having brightly coloured and patterned jars and containers that acted as advertisements for medicines that frequently contained spices. This widespread use of spices only ended with the rise in medical knowledge in the nineteenth century.

While food and medicines certainly were the two biggest and most visible uses of spices, they were used in many other lesser-known areas such as religion. The recurring theme of spices being connected to what Paradise would be like, in terms of trees, bushes, aromas, etc., is well known. Paradise or heaven being exotic, evocative, and smelling heavenly are all related to this

concept. Embalming with spices-either by themselves or via oil with spices-is an ancient technique that is connected to holy oil. Spices were used as financial assets, and rents were frequently referred to in terms of the quantum of spices especially pepper. Given their attraction as financial assets, spices were also a target for crime, and the rise and fall of spice-related crime gave a fascinating insight into English criminal behaviour over this period.

Spices were a minor commodity compared to, say, textiles or, meat, tobacco or cotton during the early modern period and therefore were not a good area of research by eminent historians such as Huw Bowen and K N Chaudhuri. This research helps to cover the use of this relatively minor commodity and shows how widespread the use of spices was in almost all early modern English cultural aspects.

The study does suffer from some limitations, though. The key issue was the lack of financial and economic data. Converting the EIC ledgers into usable data was extremely difficult and time-consuming as noted in the Economic History chapter. Production data was almost impossible to ascertain from spice-producing regions such as the Malabar Coast in India, East Africa, Indonesia, etc. There are simply no proper records to really check the production figures. Furthermore, there was no way to compare the trade activities between the East India Companies of the Netherlands, Portugal, Spain, England, France, Germany, etc. There are vast gaps in the corpus, so much so that it was not possible to duplicate the data collection methods of KN Chaudhuri. The Portuguese Earthquake of 1755 AD which destroyed Lisbon and surrounding areas also destroyed the entire records and history of the early part of the Sea Borne Spice trade, which the Portuguese started. Still, the EIC and VOC records did give some good indications of how the spice trade economics worked out.

It was also unclear and very difficult to disentangle imports from Southeast Asia, India by the EIC and how much was imported from the continent, which in turn was imported by other East India Companies such as VOC, etc. So, the total import into England remains an unknown factor. The port data was richer but suffered from the very well-known limitations of forgery, static data, lack of good record keeping, and no consolidation between various ports such as Bristol, London, etc. This meant that the valuations, amounts, customs duties, etc. had to be treated with much caution. Supply chain data was sporadic and relied heavily on secondary sources of researchers who had analysed probate data on spices that were in the inventory of deceased people in very limited locations.

The food chapter had one very big limitation; the primary and secondary sources were all related to households that were literate and were able to document their consumption. This meant that the knowledge of the lower socio-economic order of the English population, which was not literate or were not able to document their consumption, was limited. There is not much information on how they consumed spices, although anecdotal and indirect information was used, such as probate data, art, and literature.

Unlike other areas, there is substantial documentation and records for medical information, physician notes, apothecary recipes, and related matters due to the very nature of the field. The use of spices in religion was necessarily limited, as only major references relating to embalming, descriptions of paradise and heaven, and holy oil were reviewed just to establish the concept. A more detailed analysis of the theological underpinning of how paradise and smells/perfumes are connected can be undertaken as part of further research. There was not much information available on magical spells, potions, and charms so the analysis was necessarily limited. Some types of magical spells and charms were created by apothecaries, which have been dealt with

in the medicine chapter. Finally, the major limitation of the financial assets area was that the scope did not allow a deeper investigation of individual records, documents, indentures, etc., held in various archives to explore how spices came about to be used as rental payment equivalents.

The research started with multiple questions around how spice usage was prevalent during early modern England and why, after that period, it attained the reputation for not being comfortable with spices across so many cultural areas such as food, medicine, clothing, religion, crime, art, and literature. It has been a joy to explore so many different spice-related areas in different dimensions, and it was a struggle to stay focused on the research areas.



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